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SLA News

Actions of the Board of Directors, Feb 1-3, 1979 195

Networking Notes 200

In Memoriam 202

Vistas

Coming Events 203

Staff Development 205

Reviews 207

Pubs 208

163 Cost-Effectiveness and Cost-Benefit Determinations in Special Libraries
Herbert S. White

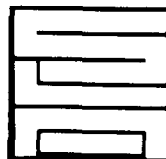
170 An Information Service for the Maritime Industry
D. G. Mellor

173 Overcoming the Criterion Problem in the Evaluation of Library Performance
John J. Knightly

179 Looking Back at the Microfilm Decision: Expectations and Experiences
Gloria J. Zamora and Martha C. Adamson

182 Survey on the Use and Cost of Scientific Journals in the Soreq Library
S. Weil

190 Information Management: Survey of Readership in Public Patent Libraries
H. Bank



24A Placement

26A Index to Advertisers

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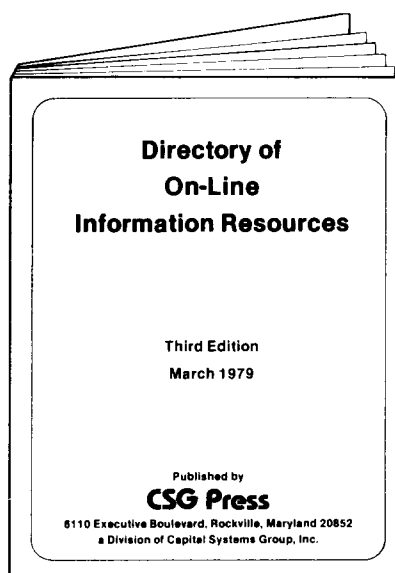
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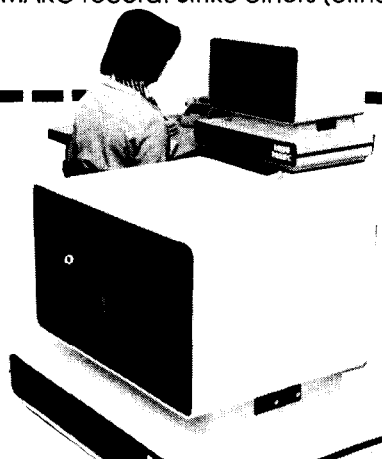
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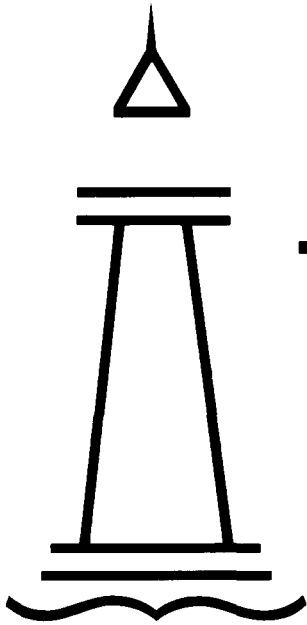
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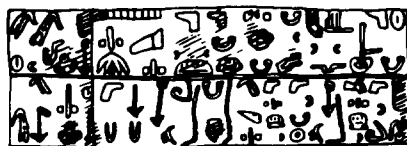
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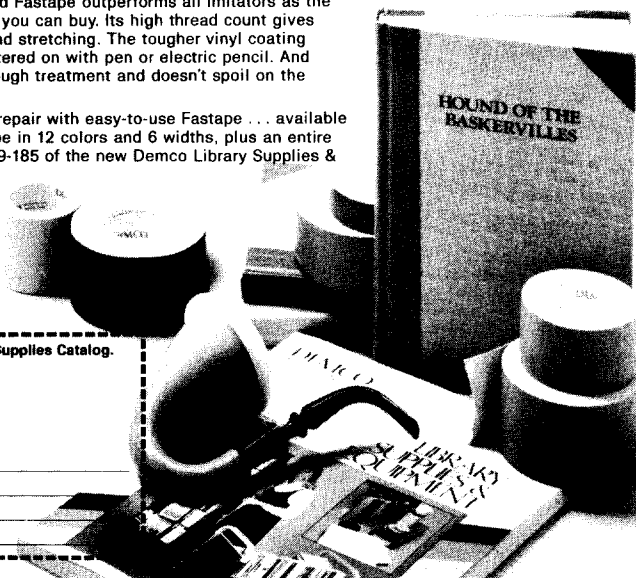
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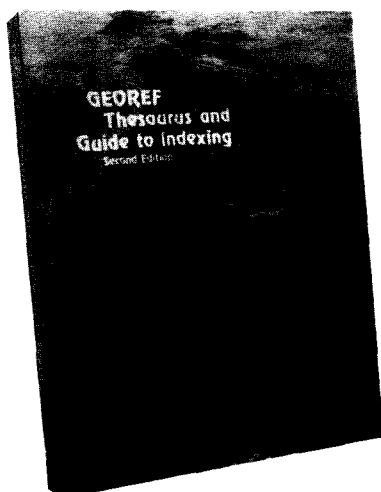
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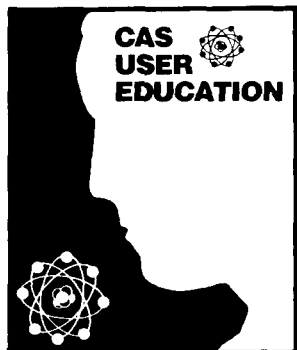


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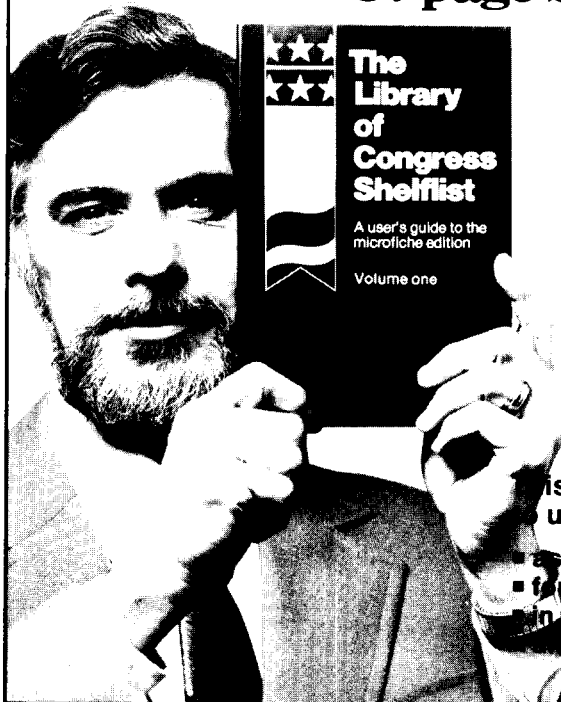
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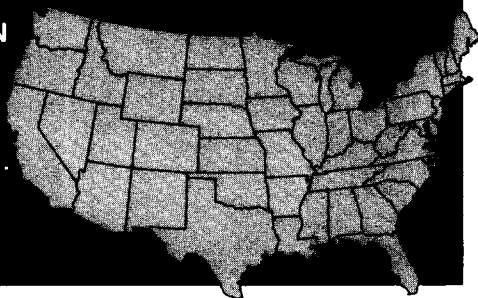
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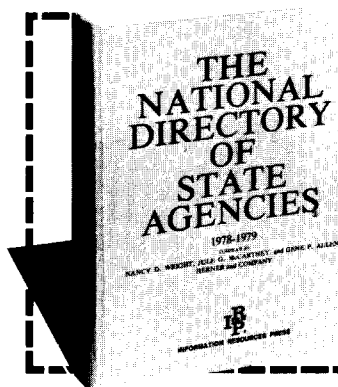
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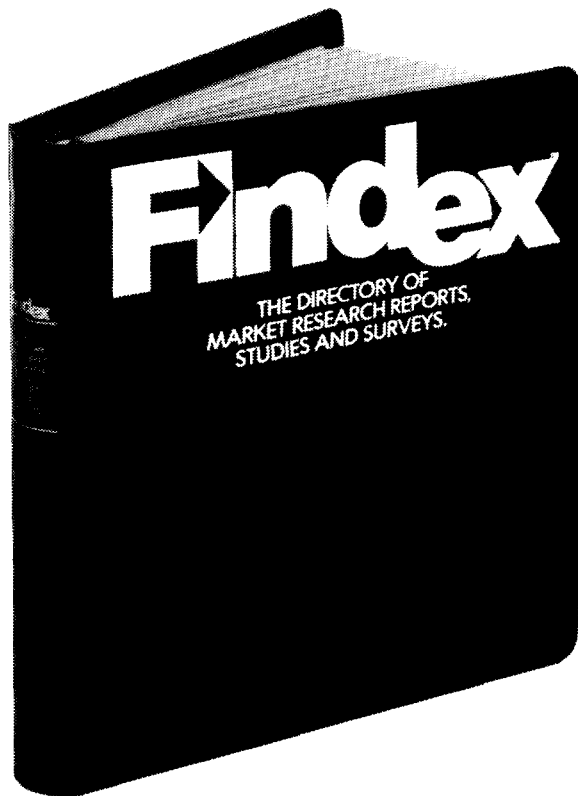
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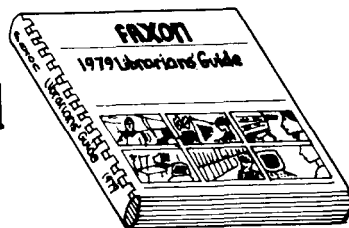
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Cost-Effectiveness and Cost-Benefit Determinations in Special Libraries

Herbert S. White

Graduate Library School, Indiana University, Bloomington, Ind. 47401

■ Mechanisms to establish and evaluate cost-effectiveness in the administration of libraries are as feasible and necessary as for any other operational unit. The determination of cost-benefit to the sponsoring organization is far more difficult, and probably cannot be made on a consistent and continuing basis. However, user perception that such cost-benefit exists, even if unsupportable in an accounting sense, can suffice to justify the validity of the library operation. It is this perception and appearance that library managers must seek to cultivate.

ONE OF THE THINGS which differentiates libraries in the for-profit sector from academic, public, and school libraries is that in these latter institutions the library is assumed to have value *per se*. In part this is because there is perhaps a greater tolerance for knowledge and learning as a self-evident good, rather than simply as a contributor to bottom line figures. However, academic librarians now report that much of this tolerance for the library is eroding under financial pressures. Nevertheless, it should be safe to assume that a university president would not, and could not, shut down the university library and sell its books, even if the administration was absolutely convinced that the library contributed nothing to academic excellence on the campus. The faculty would not allow it, the school would lose its accreditation, the graduates would not get jobs, and the Board of Trustees would fire the president at its next meeting.

By contrast, the author cannot envision any such restraining pressure on corporate officials, or company presidents comparing notes on the quality and size of their libraries.

Corporate Decision-Making

Although many companies are beginning to soften their public image, the fundamental purpose of the for-profit organization is still precisely that—to make a profit. What size profit? Stockholders never set limits on their appetites for return on investments, and when short-term profits are plowed back into the business for plant expansion and enhanced research programs, all that is being done is to trade in a present return for the expectation of an even larger future profit. Corporate executives are hired to make good decisions, and if the decisions work out well for the company, no one really cares whether or not they were scientific.

ically based. If the decisions turn out badly, nobody cares how they were arrived at either.

Most business decisions of the 19th and early 20th centuries, as well as management philosophies in existence today, were and are based on instinct and innovation. Success rates were never high, but those who did succeed were glorified and lionized, and the impression grew that such bold and incisive courage was the key to business success.

We still have some such instinctive innovators, but they are a dying breed, replaced by groups of professional managers whose objective is frequently the avoidance of a bad decision rather than the formulation of a good one. These managers, who did not necessarily start the business or grow with it, need tools with which to make good, or at least safe, decisions.

Cost-benefit and cost-effectiveness analysis programs are designed to assure the effective allocation of scarce resources. In a production environment this works reasonably well. Parameters can be established for determining the relative merits of starting a second shift or of building a new assembly plant. Models can be drawn to determine whether or not price increases will depress sales sufficiently to offset the gain in unit profitability.

The Library as Overhead

Cost-benefit analyses become more difficult when applied to overhead operations such as the library. In accounting terms, overhead is cost applied to gross profit; overhead turns profit into a smaller operating or net profit, or even a net loss. Since overhead always has a negative impact, it is always assumed to be too large. Furthermore, the advantages of overhead expenditures, while perhaps easy to claim, are difficult to justify. Why renovate the company cafeteria? Because it improves employee morale? Does it really, even if there were complaints in the last survey? Would employees prefer this to a raise? Will

renovation decrease turnover or improve productivity? If productivity later increases, how do we know that this renovation was solely or even primarily responsible? It makes for happier employees? So what? There is no tangible proof that happier employees are harder workers. We have all seen organizations with so much staff camaraderie that most of the day was spent in planning parties, picnics, bowling tournaments, and bridal showers, and almost no work at all got done.

The author is forced to conclude, from his own experience in operations and management, that a true cost-benefit analysis of an overhead organization such as the library, in terms of what it



contributes directly to organizational goals, may be neither practicable nor even possible. There are libraries, of course, whose operating budgets are allocated to user groups, either by formula or by actual use. In theory, to the extent to which the group has the right to reject library service, such an acceptance can be argued to represent cost-benefit acceptance, but in point of fact there is organizational pressure for each group to pay its so-called fair share. Part of this pressure still comes from the belief, even in business environments, that libraries are good things, and not to be reviled. Part of it comes from the recognition that, if one group refuses to pay, the others will probably have to pay more. Most importantly, they are willing to go along because their share of the allocated library expense is in fact rather trivial, and really does not make that much difference.

Generally, corporate measurement criteria have not extended to the evaluation of one overhead service against another—of a better library versus hot cafeteria lunches versus new electric typewriters versus expanding the parking lot versus doubling the number of daily mail deliveries.

Usually, the library is treated as part of the overhead pool, and a fairly insignificant one at that. Overhead funding is decreased when sales and earnings fall, or when they do not approach expectations. It can be convincingly argued that bad times are in themselves the worst times in which to cut back on research and, by extension, library activities, but those arguments are usually fruitless. Stockholders are interested in this year's dividends and this year's stock market quotations. Five years from now somebody else may own the stock, and the present owner will not care.

If decisions affecting specific overhead services such as the library are not made within the organization based on any specific or scientific cost-benefit formulation, how are they made? By and large, these decisions are based on perceptions by individuals on how the continuance, strength, growth, or decline of the library will affect their own performance. It should not be assumed that individual profit center managers will be sufficiently altruistic to vote for things that will hurt them or their performance, but which may help the organization. Managers are encouraged to be selfish in their thinking; they are rewarded for their own successes and punished for their own failures. Credit and blame are not generally shared.

The Library's "Usefulness"

Individual managers have little idea of how the operation of the library affects the success or failure of their own performance. They cannot admit that they would have committed a serious blunder, if not for certain help from the library. Nor can they accept that the existence of a strong library allows them to decrease their own technical

staffs or to increase their sales targets. While they may happily agree that the library saves them time, they will never agree that this allows them to operate with fewer people, and there is therefore no tangible cost reduction.

The lesson for librarians in this is clear. The library is perceived as being useful (these words are chosen carefully because it cannot actually be proven to be useful) to the extent that its services and activities are felt by operating profit center managers to be of positive influence on their group. Only "positive" counts. An evaluation of "having no impact" is just as deadly as a negative one would be. Having postulated that cost-benefit studies of the role of the library in the achievement of overall organization goals are probably not practicable, it could then be argued that cost-benefit analysis of operations within the library can be measured quite effectively if objectives for the library are established in terms of their impact on the performance of operating groups.

Internal Cost-Benefit Analyses

What this requires, first of all, is that librarians think of themselves as entrepreneurs running a business. The success or failure of that business comes from the acceptance and appreciation of its products and services—its operating capital comes from the willingness of the customers to provide it with a stake.

Most corporations pay little attention to how libraries allocate their funds. The budget may require line item descriptions, but the only real interest is in the cost total. In addition, most organizations impose headcount ceilings, in that additional money cannot usually be spent on full-time permanent employees without additional permission. However, it usually can be allocated to purchased services or contract labor, and sometimes even for in-house employees, as long as these are either part-time, temporary, or both.

In order for the library administration to perform its own internal cost-benefit analysis, it must obviously know both costs and benefits. Costs are easy to calculate; they come monthly from the accounting department. If we assign functional or task codes to time sheets we can get cost breakdowns by functions performed and even user groups for which services are performed.

One of the traditional management communication problems that libraries have had is that library objectives are usually inwardly directed. We will purchase and process books and periodicals to projected numbers, we will compile a certain number of bibliographies, we will achieve a 10% increase in

not our job. Economy may become a requirement, but corporate profitability is a factor that someone else is hired to monitor at a considerably higher salary. In fact, we can cost reduce our way into being fired for not doing our job, which is to run a library that is both an effective library and one which is perceived to be an effective library. Both are important, and both are inexorably tied together. The first because that is our professional responsibility, the second because it is a prerequisite for being able to do the first. It is sometimes difficult to convince library managers in for-profit environments, who are usually conservative to start with and who have been ground down by corporate propaganda, not to worry about

... a true cost-benefit analysis of an overhead organization such as the library, in terms of what it contributes directly to organizational goals, may be neither practicable nor even possible.

circulation and an 8% increase in inter-library loan. These statistics, while they may impress fellow library professionals, are meaningless to management, which is not in the book processing and material lending business. It is to the real business, or the many businesses, of the company that library objectives must relate. What does the library plan to do in support of program A and program B? At least as importantly, how do we assure that the directors of programs A and B are aware of what we are doing for them—are they direct recipients, are they told by their own people, or do we make sure we tell them ourselves?

Unless the library manager has a specific direction for the library and feels convinced that success in this endeavor is good both for the library and for the organization, then the library will inevitably drift. The librarian was hired to run a good library and to serve the needs of the organization, even if management cannot articulate them.

That is our objective; saving money is

requesting a tripling of their budgets for a program addition or a program expansion if that program makes sense. The library cannot spend enough, no matter how extravagant we get, to affect earnings by even one cent per share, and new programs are far easier to sell than a 20% increase in existing programs.

Justifiable Costs

It is possible, then, to make cost-benefit determinations in the for-profit special library, but only if there is first a determination of what will be beneficial. That determination is not practicable in terms of overall corporate goals and objectives. These are too broad to permit the library to measure its performance against the achievement of corporate performance. In fact, it might be misleading in that corporate performance may be excellent despite a poor library, or that corporate performance may be poor because of a marketing strategy decision in which the library had no part.

Nor can the library's contribution be measured simply in terms of its own internal statistics. Technical processing unit costs, circulation unit costs, or circulation per volume owned are useful tools in any library, and they may be sufficient in an academic setting in which the need for a library, and even the largest possible library, is accepted as a premise and not subject to question by the faculty. However, in a for-profit library, located in an organization for which library service is an incidental and suspect miscellaneous expense, the only meaning of benefit can come in terms of impact on those profit centers and revenue earning programs which are subject to close scrutiny, and, even more importantly, in terms of the perception of that impact by profit center managers.

With this as a yardstick, consideration of alternatives within the library is possible. Bibliographic access, which is now expanding so rapidly through various time-shared access systems, inevitably carries a cost; the cost of providing bibliographic availability

volume of material requested, its relation as a percentage to the material supplied internally (missing the tenth article is not quite so important when you have been able to immediately supply the other nine), and the user perceived importance of rapid service in general and for specific items. Of course, we must also consider what we give up in other services by detaching this half-time clerk, or by cutting \$4,000 from our other budget categories to contract for twenty hours per week of a student to do this work. That option is usually ours. Management neither knows nor cares, nor should it bother.

Academic libraries are not as fortunate. Since the concept of information service has not really been developed and no expectation for it has been aroused, except in small departmental collections which function more like special libraries, the academic library is basically expected to maintain the size of its acquisitions program. It does not have the option of transferring materials money to services or to the development of effective computer systems.

The librarian was hired to run a good library and to serve the needs of the organization, even if management cannot articulate them. That is our objective; saving money is not our job.

must be related to the cost of providing document delivery. This can be done through library purchase of single copies and subscriptions, through the purchase of multiple copies and subscriptions to assure rapid access, through effective recall procedures for material already in the system, and through providing rapid and reliable document delivery from outside the collection. Should the librarian, from the labor budget, designate one individual on a half-time basis to make a daily trip to the nearby university library, make the necessary interlibrary loan copies personally, and bring them back the same day? It obviously depends on many factors, including the

If we look at our stewardship of the library as running a private business, we will quickly see that making wrong decisions is a luxury we cannot afford. Store owners will rapidly go bankrupt if they sink capital into stock which does not move from the shelves. The comparison to libraries is apt. If we spend our money to have staff perform useless tasks, if we subscribe to bibliographic data bases in which no one is interested, we are not only wasting organizational money, we are stealing money from ourselves which we could use for more meaningful purposes. This is not to suggest that we return it as surplus. Our job, as previously stated, is not to save money. There is a whole

financial control organization; let them worry about that. Nor is it our job to help out the personnel department by taking protected misfits into the library. Our need for a high quality staff is as great as that of any other unit. Perhaps our need is greater, because our staff is usually small.

Coordination with Company Projects

The library cannot make tangible contributions to the specific programs which are carried out within the organization without first knowing what these are. This may seem obvious, but it is surprising to what extent these programs are only dimly perceived. Start by making a list of programs and activities within the organization, and then determine to what extent these can benefit from library support, and to what extent they are already supported. There are two kinds of projects that should be starred or underlined. The first consists of the ones run by individuals in a position to affect library funding and library support. Frequently these individuals, in general administration and finance, are not natural or instinctive library users, but that does not mean they do not have information problems. Lack of complaints in this instance does not necessarily imply good library service. It may mean poor service, or no service.

The second group concerns newly started projects, because new projects are most in need of information, and timeliness is critical. Frequently a new project team is put together and given specific and demanding assignments, with little if any understanding of what has transpired in the past, what documentation already exists, or what services might be available. The manager of this new project has no time to spend on literature searches. More priority must be given to logistical problems, concerns about justifying, interviewing and hiring staff, fighting for and arranging space and equipment, getting a budget established, and developing the necessary contacts with the

accountants and purchasing agents without whom life in the organization is impossible. These managers of new projects need help most of all. Yet they do not know what they need; neither do they have time to think about it.

How do we find out what projects exist, particularly what new projects are just coming into being? We must work hard at developing informal communications channels, because most decisions are made long before they are formally reported. Depending on the librarians' position in management chains, they may be participants in meetings in which decisions are made. If not, then somebody in the management chain is such a participant, and we must make it clear that it is part of their job to help us do ours by keeping us informed.

Part of the information process simply consists of talking to people, informally or through formal appointments, to find out what they are doing



and to suggest support the library might be able to provide. People like to talk about their work, like to explain what they are doing. They usually do not consider this an imposition, even if it requires translation into very basic English. At the same time, their perceptions of and expectations for services from the library are frequently restricted to the clerical provision of documents on request, and they require education just as we do.

Conclusion

The implementation of cost-benefit determinations within the library is a long overdue process. Librarians have continued, for far too long, to perform their jobs in a traditional way, partially because they report to a management which is neither knowledgeable enough nor interested enough to suggest any changes. At the same time, the premise of the library as an inherent good is coming under growing chal-

lenge in the public and academic sector. In the private sector this is nothing new, as the "bloodbaths" of the early 1970s attest. Libraries, unable to demonstrate their specific contribution to this year's profit growth, have tended to avoid financial analyses entirely. It is a third alternative, a middle ground, which this paper has sought to address.

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Herbert S. White is professor, Indiana University Graduate Library School, Bloomington.

An Information Service for the Maritime Industry

D. G. Mellor

Maritime Research Information Service, Transportation Research Board, National Academy of Sciences, National Research Council, Washington, D. C. 20418

■ The services and publications available to the maritime industry through the Maritime Research Information Service (MRIS) are reviewed. MRIS is a computer-based service sponsored by the Maritime Administration and operated by the Transportation Research Board of the National Research Council. Information distribution to the maritime industry is provided through monthly and semiannual publications to subscribers, special bibliographies, computerized retrievals on request, and on-line retrieval directly through the Lockheed DIALOG system.

THE Maritime Research Information Service (MRIS) has been in operation for about nine years. It is sponsored by the Maritime Administration and operated by the Transportation Research Board of the National Research Council for the benefit of the maritime industry. The purpose of the service is to provide rapid access to maritime information that has been brought together from numerous sources.

MRIS selects, abstracts, and stores maritime information that relates to the design, building, and operation of commercial vessels. The information covers vessels that operate on inland waterways as well as in foreign commerce.

The MRIS data base now contains over 17,000 abstracts of reports, journal articles, and conference proceedings. Storage of this information in the computer at the National Research Council makes it possible to retrieve information on request, and to use the output to produce publications.

The sources of information for MRIS input consist of articles from the various maritime journals (United States and foreign), reports resulting from government sponsored research, conference proceedings, and papers from technical societies.

The maritime information in MRIS is from international as well as domestic sources. The major input of overseas maritime information is covered

through exchange agreements with the British Ship Research Association, the Norwegian Ship Research Institute, and membership in foreign technical societies.

Basically, MRIS provides information in four different ways.

1) Subscribers receive the following two publications:

- *MRIS Abstracts*, issued in June and December yearly. Each issue covers all the information collected during each six-month period and has two major divisions: abstracts of reports and journal papers, and summaries of ongoing research. The abstracts and summaries are grouped under twenty-four subject areas that are listed in the Appendix. In addition, each issue of the *Abstracts* has a keyword index, a list of authors, and a list of publishers and performing or publishing agencies.

- *Current Awareness Service*, issued each month. It contains abstracts of published reports and papers, as well as summaries of ongoing research which were abstracted during the month. In addition, each issue contains information on maritime meetings and conferences and citations of timely transportation reports and articles. The citations are furnished through the cooperation of the Transportation Center Library at Northwestern University.

2) On-request computer retrievals are supplied for specific topics. These generally are handled by a telephone call to one of the MRIS maritime information specialists.

3) Beginning in March 1979 users could search the MRIS data base via the Lockheed DIALOG on-line retrieval system. This new mode of access to maritime information makes it possible for users to search for information on specific questions and to learn immediately of relevant information that is contained in the data base. Relevant abstracts can be displayed at the user's terminal or may be ordered through Lockheed's off-line printout service. Each abstract indicates how the user



may acquire the corresponding report or article that is represented by the abstract. Present U.S. users of DIALOG data bases do not need to make additional arrangements with Lockheed to use the MRIS data base.

4) Special publications represent the last type of MRIS output. Generally these are bibliographies with abstracts. MRIS plans to publish a special bibliography on "marine transit" that will incorporate abstracts of available papers from the October 1977 International Waterborne Transportation Conference with about 150 additional abstracts on this topic selected from the MRIS data base.

Two bibliographies of this type, already published, are *Technical Report Abstracts* covering Maritime Administration Research and Development from 1957 to 1972 and *Abstracts of Maritime Education and Training Publications*. The latter was published as a cooperative effort by the Maritime Administration, the Maritime Training Advisory Board, and MRIS.

MRIS is one of four modally oriented transportation information services operated by the Transportation Research Board. The other three are the Highway (HRIS), Railroad (RRIS), and Air Transport (ATRIS) research information ser-

vices. Since all four modes use the same software and computer, it is possible to provide multimodal retrievals when required by a requestor's need for transportation information.

There are numerous sources of information that can be tapped only through voluntary cooperation. These consist of the many individuals, companies, and state and local agencies who collect maritime information or produce re-

ports written under contract. If this information is forwarded to MRIS for input, the service can provide greater in-depth output for all users.

Continued cooperation of this type between the people seeking specific maritime information and the group that provides the information can only improve the quality and usefulness of the services that are already available to all users through MRIS.

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Appendix

All information abstracted and stored in the data base is classified according to one of the following twenty-four categories.

01 Arctic and Cold Weather Operations	14 Pollution Abatement and Control
02 Air Conditioning, Heating, and Refrigeration	15 Ports and Harbors
03 Auxiliaries	16 Propellers, Gear Trains, Shafting, and Couplings
04 Cargo and Materials Handling	17 Propulsion Machinery
05 Corrosion, Fouling, and Protection	18 Safety and Damage Control
06 Electric Generation and Distribution	19 Ship Construction, Conversion, and Repair
07 Experimental Ships and Special Type of Craft	20 Ship Design and Analyses
08 Lubrication, Fuels, and Combustion Technology	21 Ship Handling and Control Systems
09 Management and Advanced Planning	22 Ship Operation
10 Maritime Labor, Education, and Training	23 Strength of Materials and Structural Analysis
11 Marketing and Traffic Management	24 Trade Development and International Commerce
12 Materials	
13 Navigation, Communications, and Detection	

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Davis G. Mellor is manager, Maritime Research Information Service, Transportation Research Board, National Research Council, Washington, D.C.

Overcoming the Criterion Problem In the Evaluation of Library Performance

John J. Knightly

The University of Tennessee, Graduate School of Library and Information Science, Knoxville, Tenn. 37916

■ Library performance criteria in use by managers in sixty-two academic, special, and public libraries are analyzed to measure the extent to which criteria proposed in the literature are actually used, to identify types of criteria in use, and to develop guidelines for future criterion selection. The study's criterion model includes measurement on basis of users' opinion, experts' opinion, formulas/standards, comparison to other organizations, quantifiable operations, quantifiable outputs, costs. Findings suggest use by managers of few criteria of only one or two types with other types excluded. Accordingly, feedback on performance may be misleading. Recommendations are offered.

THE EXTENSIVE literature pertaining to library evaluation has introduced a seemingly endless list of criteria. Managers are awash in item-use days, exposure time, effective user hours, library use transactions, holdings and availability indexes, performance indexes, delivery times, ratios, and satisfaction rates. But, while the literature is complex and dynamic, actual practice may not be changing significantly. Evidence to be examined in this article suggests that the same technology transfer problems that exist in so many other research areas exist also in libraries. That is, the literature is going one way, while managers are going another.

In the 1970s there have been excellent books and articles on evaluation, written by Orr, Deprosopo, Hamburg, Evans, Lancaster, Kates, Saracevic, and

others (1-7). However, the complexity of the literature may be an obstacle to its usefulness. The task now is to make the literature usable. The purposes of this article are to offer a framework for viewing library performance criteria, to introduce data on criteria in wide usage, and to provide guidelines to library managers for selecting more appropriate criteria for the evaluation of their own organizations.

Types of Evaluation

Library managers have become accustomed to thinking in the system terms of inputs, processes, and outputs. Thus, the manager obtains resources (inputs), allocates them to develop capability (processes), utilizes that capability to provide products and services (outputs), and, from these outputs, has an

Table 1. Four Classes of Evaluation with Examples.

I Inputs (Resources)	II Processes (Capability)	III Outputs (Utilization)	IV Impact (Benefits)
Budget Space Salaries Gifts	Methods Collections Security Catalog Cooperative arrangements Staff Training User Education Policies Planning/ Organizing	Use of Services	Impact on objectives of parent organization—learning, company performance Cost savings compared to use of alternate sources of information Stimulation of invention or productivity Improved decisions Improved level of education Better use of leisure

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effect (impact) on the parent organization or larger community. This view of the system gives rise to at least the following four classes of evaluation also noted in Table 1: 1) effort evaluation focusing on inputs, 2) process evaluation focusing on the appropriateness and efficiency of activities and programs, 3) effectiveness evaluation focusing on the extent to which outputs accomplish organizational objectives, and 4) impact evaluation focusing on the extent to which accomplished objectives actually meet needs of the parent organization or larger community.

Additionally, relationships of classes 1-3 and 1-4 produce a fifth class of evaluation, cost-effectiveness and cost-benefit. Effective planning is concerned with all parts of the system, thus with all five classes of evaluation. However, library managers are sometimes criticized for giving too much attention to inputs and activities, and not enough attention to outputs and impact. Odiorne has called this situation the "active trap," in which the entire system approach breaks down because "people become so bemused of the activity that they lose sight of the input-output relationship" (8).

The Criterion Problem

The purpose of evaluation is to gather information on how well the library is accomplishing objectives,

with a view toward improvement of the situation if needed. Such a purpose implies that performance criteria exist by which achievements can be measured. However, the identification of appropriate measures has proven so difficult that it has come to be known as "the criterion problem" (9). A long list of evaluation approaches and measurement criteria have been offered in the literature. Although the list is long, there are only four classes of evaluation and a limited number of *types* of measurement criteria. Seven types of measurement criteria are proposed as follows:

- assessment on basis of user opinion;
- assessment on basis of expert opinion;
- assessment on basis of ideal standards;
- assessment on basis of comparison with other organizations;
- assessment on basis of quantifiable outputs;
- assessment on basis of quantifiable processes;
- assessment on basis of costs or unit costs which gain meaning in combination with other criteria to produce cost-effectiveness and cost-benefit relationships.

When the measurement categories are combined with the principal classes of evaluation, a perspective emerges

which will be called here the evaluation grid, shown in Table 2.

Criteria in Use by Managers

A pilot study was designed to test the usefulness of the evaluation grid and to gather data on the types of criteria now in use by managers. The study was based on a listing of all criteria mentioned in annual reports of sixty-two selected libraries of various types, listed in the Appendix. Although sources in addition to annual reports would be needed to give a complete picture of any library's evaluation efforts, study of current practices in the annual reports is indicative and engaging.

Criterion use is extensive, as shown in Table 2. The sixty-two annual reports included 774 criteria of various types and averaged 12.3 criteria per report.

User opinion. This type of measurement criterion was little used by the practitioners studied. Only 1.1% of criteria were of this type.

Expert opinion. Of all criteria, 20.5% were that of expert opinion. The library managers' own statements of opinion were tabulated as expert, which is appropriate since the librarians clearly are experts on their own operations. It was expected that opinion of outside experts also would be used; however, this was cited in only one instance. Expert opinion was concentrated al-

most entirely on processes evaluation. That is, the manager voiced an opinion on how well a particular procedure or approach was working, or would work in the future.

Standards/formulas. Prior to the study, it was foreseen that some criteria in use would be based on the library standards of ALA, ACRL, various accrediting organizations, and the like, or from formulas such as the Clapp-Jordan formula for academic libraries (10). Findings showed negligible use of criteria of this type, only 0.2%.

Comparison to other organizations. Comparison generally is based on quantifiable measures. The advantage of comparison is that it draws attention to areas of possible shortcoming or strength. An example can be drawn from the 1977 report of the Cincinnati Public Library, entitled "We're No. 2!" The report notes the library's second place national ranking in number of volumes read per person and in least amount expended to circulate materials. Overall, measurement on the basis of comparison appeared infrequently in the annual reports studied for this article and made up only 1.9% of criteria used.

Quantifiable measures. Nearly 60% of all criteria cited in the annual reports were quantifiable, with half directed toward processes/capability evaluation and the other half toward outputs/uti-

Table 2. Evaluation Grid: Types of Measurement Criteria and Classes of Evaluation Used in Sixty-two Annual Reports.

	Inputs/ resources	Pro- cesses/ capability	Outputs/ utilization	Impact/ benefits	Totals	
User opinion	0	0	9	0	9	1.1%
Expert opinion	6	145	8	0	159	20.5%
Standards/formulas	0	2	0	0	2	0.2%
Comparison to others	4	10	1	0	15	1.9%
Quantifiable measures	4	231	227	0	462	59.6%
Costs	106	5	0	0	111	14.3%
Other*	16	0	0	0	16	2.0%
Totals	136	393	245	0	774	99.6%
Percent of total sample	17.5%	50.7%	31.6%	0%	99.8%	

*Other includes buildings, building additions.

zation evaluation. In the sample, no example was located of use of a "newer" measurement criterion from the evaluation literature such as holdings rate, availability rate, satisfaction rate, success rate at the catalog, response time, performance index or document exposure index. For output evaluation, 89% of all criteria used were circulation totals, reference questions, and attendance figures. The other 11% were also tallies—of exhibits, on-line searches, publications, photocopies, and audiovisual productions.

Costs. Total costs, costs by category, and rising costs constituted 14.3% of all criteria cited in the annual reports. Surprisingly, only one instance of unit cost was located. Not so surprisingly, no example was located of cost-effectiveness or cost-benefit.

Library managers use only a few types of measurement criteria. Managers in the sample used an average of 2.1 types of criteria to evaluate processes; 1.2 types to evaluate outputs; 1.5 to evaluate inputs. As already noted, about 60% of criteria used were classed as quantifiable, 20% were expert opinion, 14% pertained to costs. User opinion, standards, comparison to others were each used less than 2%.

Measurement criteria tend to focus on process evaluation rather than on outputs, inputs, or impact. Slightly over half (50.7%) of all criteria used in the annual reports were concerned with evaluating processes; 31.5% focused on outputs; 17.6% focused on inputs. No example was located of impact.

Recommendations

The findings from this study of measurement criteria used in library annual reports give rise to several recommendations. First, it is recommended that managers recognize more explicitly the classes of evaluation towards which they are directing their criteria. This would tend to lead a manager toward a primary focus on outputs for the evaluation purposes of the annual report; currently the primary focus is on processes. Second, it is

recommended that managers use additional types of criteria. Any criterion tends to indicate in only a limited or approximate way the actual performance of the unit being evaluated. The present use of only one or two types of measurement criteria suggests that feedback on performance may be misleading for some managers. Use of several types of measures would increase probability of a balanced appraisal. When managers select additional criteria they may wish to consider the following measures.

- *User opinion.* Users' perceptions of the performance of the library would seem to be one of the types of feedback desired routinely by managers. Its infrequent use seems surprising; managers may wish to begin sampling users' opinions as one part of the library's evaluation program.

- *Expert opinion.* Use of outside expert opinion can provide stimulating and constructive feedback on programs and procedures, yet this use was cited in only one instance. More managers may consider bringing in an outside expert or even a panel of outside experts for evaluation and planning purposes.

- *Standards.* One opinion on standards can be stated as follows:

There can be little doubt . . . that the overall effect of standards has been to upgrade libraries, providing substandard institutions with yardsticks by which to measure their deficiencies (11).

Typically, library standards have focused excessively on inputs rather than effectiveness and, additionally, have been based only on expert opinion. But, even with weaknesses, standards may be usable by more managers as one type of measurement criterion.

- *Comparison to other organizations.* Even recognizing that some comparisons may not make their way into an annual report because they are unfavorable, it still seems that this criterion is underused. Comparison can draw attention to strengths or to areas needing correction; many managers may wish to select it for greater use.

• *Quantifiable Measures.* It seems time for more managers to try some less traditional measures. Circulation, reference questions, and attendance are fine but how about experimenting with a satisfaction rate, holdings rate, success rate, availability rate, measurement of response time, or other recommendations which abound in the literature?

• *Costs.* Cost-effectiveness is difficult and cost-benefit seems beyond the state of the art. However, unit costs permit helpful feedback and seem to deserve greater use by managers. Only one example in sixty-two reports is too few.

Studies indicate that the process by which new information is actually perceived, internalized, and used in-

volves five stages: awareness, interest, evaluation, trial, and adoption (12). Librarians are probably at the "interest" stage in their adoption of new measurement criteria. Managers are aware of excellent studies on measurement and evaluation and are interested in measures which will show more effectively the strengths and limitations of their units' performance. The immediate requirement for managers is to become more involved in the active selection of criteria to be used on a trial basis. The requirement for library school teachers and writers is to make measurement and evaluation more understandable and usable. By working together, those involved can help to surmount the criterion problem.

Appendix. Listing of Library Annual Reports

1. Fulton High School, Knoxville, Tenn.
2. Nichols School, Lenoir City, Tenn.
3. Webb School, Knoxville, Tenn.
4. Central High School, Knoxville, Tenn.
5. Bearden Jr. High School, Knoxville, Tenn.
6. Tuscola High School, Tenn.
7. University of South Carolina, Columbia
8. University of North Carolina at Greensboro
9. University of British Columbia, Vancouver
10. University of North Carolina, Chapel Hill
11. University of Pennsylvania Libraries, Philadelphia
12. Duke University, Durham, N.C.
13. Johns Hopkins University Library, Baltimore, Md.
14. University of Michigan, Ann Arbor
15. Wayne State University, Detroit, Mich.
16. Texas A&M University Libraries, College Station
17. Pennsylvania State University Libraries, University Park
18. Massachusetts Institute of Technology, Cambridge
19. Johns Hopkins University Library
20. Ohio State University, Columbus
21. University of Colorado Libraries, Boulder
22. Northridge Library, California State University
23. State University of New York, Albany
24. University of Wisconsin, Madison
25. University of Michigan, Ann Arbor
26. University of Maryland, College Park
27. University of Georgia, Athens
28. University of Houston, Tex.
29. University of Tennessee at Chattanooga
30. University of Tennessee at Knoxville
31. Cornell University, Ithaca, N. Y.
32. Columbia University, New York City
33. Yale University, New Haven, Conn.
34. Louisiana State University, Baton Rouge
35. University of California at Los Angeles
36. Wichita State, Kan.
37. Princeton University, Princeton, N.J.
38. Tulane University, New Orleans, La.
39. State University of New York, Buffalo
40. Dartmouth College Library, Hanover, N.H.
41. University of Virginia, Charlottesville
42. Northwestern University, Evanston, Ill.
43. University of Minnesota, Minneapolis
44. Indiana State University, Terre Haute
45. University of California at Davis
46. University of Kansas, Lawrence
47. John Crerar Library, Chicago, Ill.
48. Knoxville-Knox County Public Library, Tenn.
49. Chattanooga Public Library, Tenn.
50. Memphis Public Library and Information Center, Tenn.
51. Brooklyn (N.Y.) Public Library
52. Wichita Public Library, Kan.
53. Portland Public Library, Ore.
54. Buffalo and Erie County (N.Y.) Public Library
55. Jefferson Parish Public Library, Metairie, La.
56. Ft. Loudon (Tenn.) Regional Library
57. Indianapolis-Marion County Public Library, Ind.
58. Haywood County, N. C., Public Library
59. Madison Public Library, Wisconsin
60. Carnegie Library of Pittsburgh, Pa.
61. Anderson County, Campbell County, Claiborne County, Morgan County, Scott County, Union County, Tenn.
62. Highland Rim Regional Library Center, Murfreesboro, Tenn.

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John J. Knightly is assistant professor, Graduate School of Library and Information Science, The University of Tennessee, Knoxville.

Looking Back at the Microfilm Decision: Expectations and Experiences

Gloria J. Zamora and Martha C. Adamson

Air Force Weapons Laboratory, Technical Library, Kirtland Air Force Base, N.M. 87117

■ A technical library in a physics and nuclear science research laboratory replaced its bound journal collection with commercially produced microfilm cartridges in order to relieve a space shortage. Cost figures, microfilm availability, and space savings are discussed.

THERE WAS NO DOUBT in 1976 that the Air Force Weapons Laboratory Technical Library would replace its bound journal collection with microfilm. Both the library's staff and its parent organization recognized a critical space shortage and its inescapable remedy. Librarians and administrators at all levels were grateful for such unanimous agreement, which permitted the planning process to proceed swiftly.

In addition to the space shortage, memoranda at the time also spoke of several other reasons for undertaking a microfilm acquisition program. For example, during a past budget cutback, subscriptions to some key journals had been discontinued for a one- or two-year interval. Some backfiles remained unbound because issues were missing and replacements proved too costly. In addition, photocopying hastened the deterioration of existing bound volumes.

The microfilm acquisition program proposed to commit \$250,000 over a five-year period to the replacement of bound journal backfiles with commer-

cially produced microfilm cartridges. The \$250,000 figure was derived from discussions with a nearby research library that recently had undertaken a similar conversion. Microfilm cartridges were chosen over reels because it was felt that they are less subject to deterioration in both handling and storage. The most recent five years of each journal were to be kept in hard copy in accordance with the commonly held principle that scientific literature is most heavily used during its first five years. Removal of bound journal backfiles was expected to alleviate but not solve the space shortage.

Equipment and Instruction

In an effort to ease the user's transition to microfilm, the library gave particular attention to the selection of dry-process reader/printers, deciding upon the 3M Model 500CT. Two machines were made available at no cost to users or their project fund. The machines were placed in the same room in which the noncirculating microfilm cartridges were housed. Clients were urged to use

the unsupervised machines to read articles and to freely print anything which might prove useful to them. Any user who expressed an interest was given individual instruction on the use of the machines. Topics covered were loading cartridges, focusing, printing, and rewinding. Cautions about the fragility of lenses and film were avoided since it was believed that this might inhibit the user. When introducing clients to the system, special emphasis was placed on the completeness and ready availability of microfilm backfiles. It was the library's opinion that the conversion would be accepted by users if they could be convinced that the library's microfilmed backfiles were just as accessible as bound journals.

Unanticipated funding facilitated the substantial completion of the microfilm acquisition program within a two-year period. The project cost \$158,209 including reader/printer and storage equipment to convert 248 journal titles to microfilm cartridge backfiles, or an average of \$638 per title. Some backfiles were purchased only as far back as the library had hard copy holdings (usually from the library's founding in 1947), while others were purchased in their entirety. This choice was greatly dependent upon the form of the "package deal" offered by the manufacturer. To date, 248 of the library's 464 journals, or 53% of the holdings, have been purchased. An additional twenty-seven journals which have recently become available are presently under consideration for purchase.

Positive Results

The library's staff feels that the choice of microfilm cartridges over reels was a good one. Deterioration from dust and fingerprints is minimal. It has been necessary to splice eight to ten broken films during the two years in which the system has been available. Without exception, the broken films were damaged by improper rewinding or improper removal from the machine.

In converting to microfilm backfiles, 3,275 film cartridges have replaced 3,365 bound journal volumes and some unbound back issues. In evaluating this almost one-for-one exchange ratio, it should be noted that some partial runs of bound journals were replaced with complete runs on microfilm if the manufacturer offered an attractive price on the purchase of a complete set. The authors believe that most libraries undertaking a similar conversion project will find the "package deals" equally appealing and should plan for expanded holdings when purchasing storage cabinets.

The replacement of 3,365 bound journal volumes freed 696 running feet of shelving, or 16% of the total shelving available. In an effort to release even more shelf space, some bound copies of the most recent five years' issues are also being converted to film. This accelerated conversion has been favorably received by users who find the existence of both bound volumes and microfilm backfiles to be confusing rather than convenient. As one user expressed it, "[I] would like to see more journals added to microfilm...[and] would like microfilm to be more current...[It is] easier to use than both microfilm and bound or individual issues." Another commented, "[I] like microfilm because all the cartridges are located in one place and you don't have to xerox [photocopy] from thick books."

Photocopy Use

A recent in-house survey disclosed that 68% of microfilm users only scan an article on the screen to determine its relevance before printing it in its entirety for reading at a later time. It seems likely that users who formerly photocopied articles from bound journals have simply transferred this action to microfilm. The 707 registered borrowers of the books and journals section of the Technical Library (the Technical Reports Section of the library maintains its own borrower files) made an average of 1,900 copies per month

during the last year. In the first six months for which copying statistics were kept, June through December 1977, an average of 1,485 copies were made each month. During the next six months, January to June of 1978, the average rose to 2,368 copies per month, an increase of 60%. The library expects the rate of copying to continue to increase and is budgeting accordingly.

In spite of heavy printing volume, potential conflicts with the 1978 Copyright Law have not materialized thus far. The microfilm machines fall in the "unsupervised copier" category of the copyright law; each machine carries the appropriate warnings. Observation indicates that the typical user makes one copy of an article for research use. Informal logs show that no one of the library's 248 microfilm journals receives extraordinary use, nor is one article repeatedly copied by different users. Since the purchase of microfilm files inherently carries with it the potential for blow-back copies, the library anticipates little difficulty in complying with the law.

Conclusions

Replacing backfiles of bound scientific journals with microfilm can be a

successful method of recovering shelf space while maintaining an acceptable level of user satisfaction. The scientific library described in this article found that 16% of its shelf space was regained by conversion to microfilmed journal backfiles. The amount of recoverable shelf space is limited because only slightly over one-half of the library's journals are available on commercially produced microfilm.

Conversion to microfilm cartridges cost an average of \$638 per journal title. This figure includes the cost of acquiring complete sets of popular journals that the library previously owned only as partial runs.

When offered unrestricted printing from microfilm files, the majority of users prefer to print before reading. Libraries planning to offer unrestricted copying as one of their services should budget accordingly.

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Gloria J. Zamora and Martha C. Adamson are librarians, Technical Library, Air Force Weapons Laboratory, Kirtland Air Force Base, New Mexico.

Survey on the Use and Cost of Scientific Journals in the Soreq Library

S. Weil

Soreq Nuclear Research Centre, Yavne, Israel

■ A survey on the use of journals at the Soreq Nuclear Research Center Library was conducted to determine 1) whether the allocation of the largest share of the total library budget to journal subscriptions is justified and 2) which journals are in low use and could be discontinued in view of budgetary difficulties. In the analysis of the compiled data, the price/use of individual journals as an indicator for journal renewal or cancellation was also considered. Criteria for defining core journals are suggested. The limitations in the application of journal surveys are discussed with regard to the more general problem of price increases of subscriptions.

OF THE TOTAL library budget for the Soreq Nuclear Research Centre, the expenditure for journal subscriptions is constantly increasing. In the late 1950s about 60% of the budget was used for scientific journals, whereas now 85% or more is allocated to journals, leaving little for the acquisition of books, reports, and other library material.

This trend is due largely to a continuing increase in journal prices of at least 15% per year on the world market, coupled with the effect of the inflation of the Israeli pound against the U.S. dollar. Although the library receives an increased budget in local currency, it inevitably is insufficient to keep pace with rising prices. In addition, the amount of information published increases every year. For example, in 1960 *Physical Review* was published in four volumes, had approximately 10,000 pages, and cost \$160. Today the journal

is divided into four sections, each with two volumes; it totals approximately 30,000 pages and costs \$720 per year. Often, users require new journals on highly specific subjects, and the library is obliged to order these publications.

During the three-month period January–March 1977, the library staff conducted a formal survey of the use and costs of scientific journals in the library to determine to what extent the journal collection is in use and whether allocation of such a large part of the total library budget to journals is warranted. In addition, since increasing journal prices would eventually necessitate subscription cancellations, it was hoped that the results of this survey would serve as a guide in deciding which journals to retain. In the past, about 3% of the total journal subscriptions were cancelled every year, partly because new titles were requested and partly because budgetary allocations could not

keep abreast with price increases. These cancellations were based on proposals by the librarian which were discussed with and approved by the heads of research departments.

Many similar surveys have been conducted at various other libraries throughout the world (1-5). The results of these surveys are specific to the individual collections and user activities and therefore cannot be applied to the Soreq library. However, the present survey noted the conclusions and applied some of the methods of these other surveys in order to obtain the relevant data necessary for the evaluation of journal use in the library at Soreq.

Method of Data Compilation

The data on the use of journals during the survey period were collected in the following ways:

1) The list of current journal subscriptions and the list of journals on exchange were sent to the 125 users of the library, with a request that they mark all journals they currently used and thought should be reordered based on their needs and interests. Half of the users returned their lists within two weeks; 95% of the other half returned them after one or two telephone reminders. All the replies were checked and any apparent discrepancies with

known user habits were discussed individually and clarified.

2) Use of journals in the library was studied in two ways:

- Current issues: During the survey, the users were requested to sign a slip attached to the most recent issue of each journal to indicate that they had used that journal. After three months the slips were detached from the journals, arranged alphabetically according to title, and the number of users were counted. If the same user signed the slip of several issues of the same journal, this signature was counted only once.

- Other issues: The readers were requested not to reshelve journals during the survey. All items left on the tables were counted every morning and recorded.

3) Requests for photocopies from users at Soreq and other libraries were recorded.

4) Loans and interlibrary loans of journals were recorded in the same way as photocopies.

Every use recorded was counted as one point. All the points were tallied on an alphabetical list of current journal subscriptions that served as the statistical record (Table 1). Each journal received a cumulative use number equal to the sum of points it received. Then the journals in the alphabetically

Table 1. A Sample of the Statistical Record of Journals in the Survey.

Title	Reader choice from list	Scanned in Library		Loan	Photocopy	Total—cumulative use number
		Current issues	Other issues			
Acta Chem. Scand.	6	3	3	6	3	21
Acta Crystallogr.	6	3	...	...	...	9
Acta Met.	4	1	...	...	...	5
Adv. Math.	4	4	...	...	1	9
Adv. Phys.	24	9	...	2	...	35
Aeq. Math.	1	...	...	...	...	1
Am. Ceram. Soc. Bull.	9	6	...	...	...	15
Am. J. Phys.	19	13	1	...	...	33
Analyst	8	5	5	...	1	19
Anal. Chim. Acta	11	5	4	1	7	28
Anal. Abstr.	13	...	...	...	...	13

Table 2. Journals Ranked in Order of Decreasing Frequency of Use. Subscription Cost and Cost/Use are Given for Each Journal.

Rank	Title	Frequency of use	Subscription costs (\$)	Cost/use (\$)
1	Phys. Rev.	156	476	0.76
2	New Sci.	116	32	0.07
3	J. Phys.	101	968	2.4
4	Phys. Rev. Lett.	100	182	0.45
5	Aviat. Week Space Technol.	98	45	0.12
6	J. Appl. Phys.	98	127	0.32
7	Appl. Phys. Lett.	96	68	0.18
8	J. Chem. Phys.	84	240	0.72
9	Appl. Opt.	83	110	0.33
10	Science	81	80	0.25
11	J. Opt. Soc. Am.	80	74	0.23
12	IEEE Trans. & Journals	79	1127	2.02
13	Sci. Am.	78	18	0.05
14	Nature	76	123	0.4
15	Phys. Lett.	70	484	1.72

arranged statistical record were rearranged according to decreasing frequency of use (Table 2). Journals with the same number of cumulative use numbers were listed alphabetically. Since the data were treated according to frequency of use, the rank number was not relevant.

The cost/use was calculated by dividing one-quarter of the 1976 annual subscription price of each journal (since the survey covered only three months) by the number of times it was used during the period surveyed.

The following factors were not taken into consideration although they may have had an effect on the total picture.

- Use of the same journal several times on the same day. For example, abstract journals were mostly reshelved immediately after use (since it would be uncomfortable to work at a table piled up with volumes), and so they were not counted. When a journal was found on a table it was assumed that it was in use only once during the day.

- No distinction was made between journals published at different frequencies, i.e., weekly, monthly, quarterly. Hence, during this time period, eleven to thirteen issues of weekly journals were surveyed, whereas only one issue of the quarterlies was included.

- The statistics are a mixture of two kinds of data, i.e., they combine the number of users with the number of times the journals were used (anonymously), where often one count represented several users (e.g., photocopy prepared for a project).

- The users of the library were cooperative and helpful. However, since these users were accustomed to helping themselves without signing slips and to reshelving after use, some of the uses were not recorded. This means that those recorded are a minimum count.

Since these limitations applied to all the journals, they were not considered to have a significant influence on the results.

Analysis and Interpretation of the Collected Data

The data on the frequency of use of all currently received journals and their costs are correlated in Tables 3 and 4. The total number of different journals in the Soreq library at the time of the survey was 444, of which 364 were ordered and the remaining 80 were received on exchange or as gifts. The annual cost of these subscriptions at 1976 prices was about \$51,000. A total of 7,762 usage points were recorded dur-

ing the period of the survey. Both tables demonstrate that the current journal collection is in full use.

It can be seen from Table 3 that 82.5% of the journals were in use five or more times during the survey and that they account for approximately 97% of the total annual subscription cost. The first 300 most frequently used (eight or more times) journals (68.1% of the total number) constituted 92.7% of all uses and accounted for 85.5% of costs. If all journals used less than eight times were cancelled, 14.5% of the expense for journals could be saved or used for other purposes.

The data on journals which were used seven times or less during the survey are given in Table 4. Of the 141 journals considered in this table, 71 are regularly received as gifts or in exchange for library reports. It can be assumed that if the library had to pay

for these journals, most of them would not be ordered. The 70 subscriptions in this low use category, which represent 14.5% of the total cost, were thoroughly checked. First, it was found that despite the relatively low use during the survey, some of these journals must be retained for various reasons. Fifteen of the 70 journals purchased are abstracting and indexing journals which are not available on loan from other libraries; furthermore, the low number of usage points that they received during the survey may not reflect their real use. Nine are on the subject of nuclear energy; since the Soreq library is one of the libraries in Israel responsible for this subject, it is obliged to retain them. Seven journals are needed by a small group of mathematicians. Second, only nine journals were not used even once. However, only one of these was ordered; the eight others are gifts.

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Table 3. Use and Costs of Journals.

Cumulative number of journals		Frequency of use (points)	Cumulative use of journals		Cumulative costs	
No.	%		Points	%	(\$)	% of total costs
25	5.7	49-156	1,965	25.3	5,576	11
50	11.4	35-48	2,980	38.4	14,312	28
100	22.8	24-35	4,466	57.5	24,459	48
150	34.2	18-24	5,528	71.2	29,897	58.5
200	45.6	14-18	6,145	79.1	36,360	71.3
300	68.1	8-14	7,211	92.7	43,643	85.5
363	82.5	5-7	7,594	97.8	49,450	96.8
444	100.0	0-4	7,762	100	51,080	100

Table 4. Use and Costs of Low-Use Journals.

Number of points	Number of Journals			% of total journals	Cost	
	Total	Subscrip.	Exchange		(\$)	% of total journal costs
0	9	1	8	2.0	57	0.1
1	26	10	16	5.9	212	0.4
2	12	3	9	2.7	293	0.6
3	15	8	7	3.4	369	0.7
4	18	11	7	4.1	699	1.4
5	19	15	4	4.3	1,548	3.0
6	20	12	8	4.5	1,757	3.4
7	22	10	12	5.0	2,502	4.9
Total	141	70	71	31.9	7,437	14.5

Actually, the 80 journals used four times or less account for only 3% of the total costs.

Price/Use

As the "use" criterion did not suggest any possibilities for significant savings and the reality of budget restrictions still loomed, additional ways were sought to reduce expenses for journal subscriptions without severely affecting the needs of the users. From the data on frequency of use and the subscription prices, the price/use was calculated for each journal. This resulted in a set of lowest price/use (\$0.10-\$0.35/use) (Table 5) and a set of highest price/use journals (\$4.00-\$31.80) (Table 6) which were then analyzed as follows:

- Lowest price/use journals: All journals in this list were used at least ten times during the survey. The most expensive journal in this group was priced at \$127, while the average price was \$30 for an annual subscription. Fifteen were among the 25 most frequently used journals and all were among the first 250.

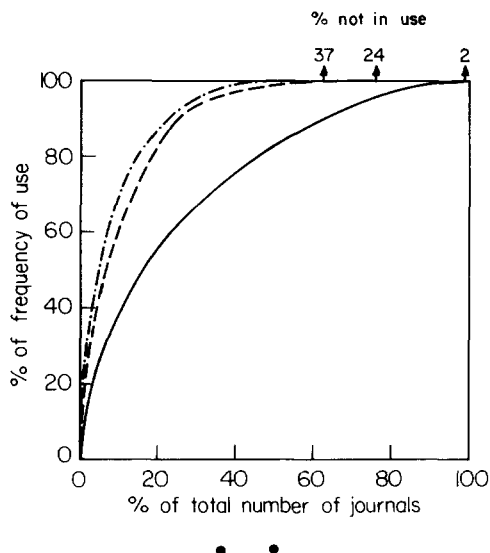
- Highest price/use: A list of the 50 highest price/use journals was prepared. Of the journals in this list only five were among the 100 most frequently used, while sixteen journals were used five to seven times. The cost of these sixteen journals was \$4,200 per year. This aspect of price/use gave an additional indication as to where costs might be cut.

Discussion and Conclusions

The survey clearly showed that the journal collection is being fully used and that the allocation of a large part of the library budget for the acquisition of journals seems to be justified.

A study of the use patterns of 220 physics journals in the MIT Library (1) revealed that 37% of these journals were not in use even once during their 3½-month survey, while 22% of these journals accounted for 90% usage. In another periodical use study at the Educational-Psychology Library at

Figure 1. Use patterns shown by various surveys. MIT Library (physics journals); --- Ohio State University, Educational-Psychology Library; — Soreq Nuclear Research Centre Library.



Ohio State University (2) it was found that among 804 journals surveyed 24% were not used at all, while 25% of these journals accounted for 90% usage. At the Soreq library during the survey period 98% of the journals were used at least once, while 63% of all journals accounted for 90% use. These findings are compared in Figure 1.

The high frequency and the more even spread of the use of journals at Soreq is noticeable because in the studies undertaken at the other institutes, highly specialized journal collections were surveyed (physics and psychology, respectively), while the Soreq survey covered all the journals in all scientific fields. In addition, due to budget restrictions in previous years at those libraries, all duplicate and many low use subscriptions had already been cancelled.

If budget limitations did not exist, the results of surveys on the use of journals would indicate which journals were not in use and could therefore be cancelled in favor of new subscriptions recommended by library users. How-

Table 5. Journals in the Lowest Cost / Use Range (\$0.10-0.35 / use).

Title	Subscription cost(\$)	Rank (Table 2)
New Sci.	32	2
Aviat. Week Space Technol.	45	5
Appl. Phys.	68	7
Science	80	10
J. Opt. Soc. Am.	74	11
Sci. Am.	18	13
Phys. Today	34	17
Rev. Sci. Instrum.	59	18
Laser Focus	35	19
Anal. Chem.	18	20
Chem. Eng. News	23	22
Rev. Mod. Phys.	45	23
Electronics	60	25
Can. J. Phys.	60	32
J. Appl. Phys.	127	36
Appl. Opt.	110	39
Phys. Rev. Abstr.	35	42
Wireless World	11.50	43
Philips Tech. Rev.	19	52
Am. J. Phys.	48	61
Mach. Design	40	62
Chem. Ind.	39	67
IBM J. Res. Dev.	10	68
Instrum. Contr. Syst.	25	73
Bull. Am. Phys. Soc.	29	75
Contr. Eng.	20	77
Mater. Engin.	36	78
J. Chem. Educ.	12	85
Ind. Res.	17	93
J. Irreproduc. Res.	2.50	96
MADA	8	97
Chem. Soc. Rev.	26	100
Electron. Eng.	21	101
Int. Defence Rev.	24	102
Philips Res.	18	113
RCA Reviews	6.50	114
Army Res. Dev.	7	118
Environment	20	119
Bull. At. Sci.	17	126
J. Res. A	13	128
National Defence	14	129
Plating Surf. Finish	25	150
Energia Nucleare	21	171
Nucl. Safety	21	175
Am. Ceram. Soc. Bull	14	179
Israel J. Med. Sci.	5.40	193
Plast. Eng.	20	196
Fusion	10	209
Mater. Eval.	18	215
Israel J. Technol.	10	230
J. Res. B	11	245
Calen. Forthcoming	4	250
Sci. Tech. Meetings.		

Table 6. Journals in the Highest Cost/Use Range (\$4.00–\$31.80/use).

Title	Cost/Use (\$)	Rank (Table 2)
Chem. Abstr.	31.8*	83
J. Electroanal. Chem.	29*	355
Coord. Chem. Rev.	19.87*	222
Metal Abstr.	19.32*	318
Dokl. Phys. Chem.	13.04	328
J. Diff. Equations	11.25	369
Optik	11.20	332
Sov. Radiochem.	10.08	335
Thermochim. Acta	10	358
Bull. Akad. Nauk USSR—Chem.	9.75	249
Sov. At. Energy	9.42	323
J. Nucl. Mater.	9.28	316
Sov. Electrochem.	9.28	303
Acta Crystallogr.	8.92	264
Chem. Phys. Lett.	8.90*	26
Rus. J. Inorg. Chem.	8.75	302
J. Radioanal. Chem.	8.65*	214
Acta Met.	8.25	346
Int. J. Heat Mass Transfer	8.20	352
J. Less-Common Metals	8.07*	212
Nucl. Phys.	7.70*	29
J. Magn. Magn. Mater.	7.70	329
J. Non-Cryst. Solids	7.27	269
Rus. J. Phys. Chem.	7.00	258
Ferroelectrics	6.81	292
Nucl. Eng. Design	6.63	187
Phys. Abstr.	6.58	200
Thin Solid Films	6.58*	115
Dokl. Chem	6.06	223
J. Chem. Thermodyn.	6.00	254
Bull. Akad. Nauk USSR—Phys.	5.96	207
J. Cryst. Growth	5.83	157
Surface Sci.	5.75*	107
Physica	5.68*	98
Radiat. Eff.	5.41*	130
Water Res.	5.27	282
Adv. Math.	5.1	265
Progr. Nucl. Eng.	5	198
J. Thermal Anal.	4.93	297
Mater. Sci. Eng.	4.78	140
J. Appl. Crystallogr.	4.72	268
Inorg. Chim. Acta	4.66	183
Mass Spectrosc. Bull.	4.46	317
J. Fluorine Chem.	4.42	315
Spectrochim. Acta	4.37	177
J. Solution Chem.	4.25	270
J. Magn. Resonance	4.13	219
Radiochim Radioanal. Lett.	4.06	189
Z. Phys. Chem.	4.02	164
Phys. Status Solidi	4.00*	36

*Journals costing more than \$400 per year.

ever, as budget limitations do exist, each library must determine those journals which belong to the core collection and those which deal with peripheral subjects and are obtainable on loan or as photocopies from local scientific libraries.

The criteria (aside from frequency of use) for journals to qualify for our core collection were established as follows:

- abstracting and indexing journals which are never available on loan;
- journals dealing with nuclear science, since the library is specialized in this field;
- journals with low price/use;
- journals on subjects of interest to a small but specialized group of scientists.

Surveys on journal use can serve as a guide to eliminating the least needed material, as well as to establishing criteria for the core collections. However, surveys alone cannot be used in bridging the growing gap between increas-

ing costs of journals and decreasing library budgets.

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S. Weil is head, Library and Technical Information Department, Soreq Nuclear Research Centre, Yavne, Israel.

Information Management:

Survey of Readership in Public Patent Libraries

H. Bank

Directorate General, Scientific and Technical Information and Information Management
Commission of the European Communities, Luxembourg

■ An inquiry was made in 1976 among the users of 35 patent libraries in the member countries of the European Community. The results showed that, in most of the countries, the public is reasonably well served with patent libraries, but that most of these are underutilized. The study further suggests that one reason for this could be that the services of the libraries are not sufficiently promoted.

THE PRESENT STUDY of the readership of public patent libraries was made in September and October 1976. It covers most of the patent libraries and similar institutions within the member states of the European Economic Community (EEC), libraries connected with patent offices, as well as specialized patent libraries and public libraries with patent collections.

The study covers eight* of the nine member states; Luxembourg was omitted. The results of the study were meant to substantiate recommendations for improving the access to and the promo-

tion of the use of patent literature as a source of technological information. This study included 35 libraries; the results of 31 libraries are reported.

The objective of the study was to provide information on the services offered to the public by public patent libraries. An important part of this information has already been published.† The present survey, therefore, was conducted to ascertain:

- how many people use the libraries, how frequently, and for how long each visit lasted;
- who uses the libraries;
- for what purpose the visits were made;
- whether the users are satisfied with the facilities provided by the libraries.

Extracted from Report EUR 5831/e-1977 for presentation at the IFLA Conference, Science and Technology Libraries Section, Štrbské Pleso, Czechoslovakia, Aug 27-Sep 2, 1978.

*The eight countries are Belgium, Denmark, France, West Germany, Ireland, Italy, the Netherlands, and the United Kingdom.

†*Patent Information and Documentation. An Inventory of Services Available to the Public in the European Community* (Verlag Dokumentation, 1976).

The study was made through a short questionnaire which the users of the patent collections were requested to complete.

The libraries, in particular the provincial libraries, are organized in different ways in the various countries. In France they are in some cases directly owned or at least controlled by the Patent Office in Paris. In Germany, the Patentschriften-Auslegestellen are sponsored by local authorities and are fully independent of the German Patent Office. In the United Kingdom the patent collections are held by ordinary public libraries which are also fully independent of the United Kingdom Patent Office.

The patent office libraries are also quite different. Most hold extensive collections. The collections of the Irish and Italian offices are, however, rather small. In most countries the patent office library is a part of the patent office, but in the United Kingdom the Science Reference Library is independent of the Patent Office. It has a large collection of both patent documents and technical literature. In West Germany the main patent office is in Munich, but a subsidiary with its own library exists in West Berlin.

Results

Sources of Users

In general the majority of the users come from the city or agglomeration in which the library is situated; in nearly all cases more than 80% of the visitors come from within a distance of less than 50 kilometers. For the sake of simplicity the survey area has in most cases been defined as cities with more than 50,000 inhabitants within a distance of 50 kilometers from the library.

A statistical analysis shows that there is a strong correlation between the number of persons served by patent libraries and the number of persons employed in industry in the member states (Italy excluded). Both figures may



simply reflect the differences in the degree of industrialization in seven of the member states. Italy is, of course, an exception in that the only patent library is situated in Rome, far away from the concentrations of industry and population in the north of the country.

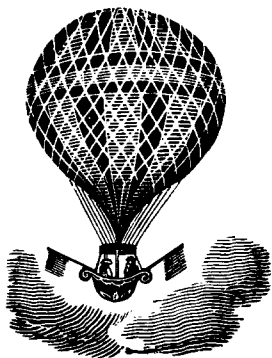
The results of the study suggest that certain patent office libraries have a high number of users simply because the library serves a metropolitan area with a large population.

Frequency of Visits

There is, however, one factor that must be taken into account: the frequency of visits as indicated by the users themselves. In Munich, for example, 138 users stated that they visit more often than once a week and 75 said that they use the library every day. However, the provincial libraries have none or only a few such users. What is the consequence of this for our comparison?

It seems reasonable to say that persons who stay at the patent office every day for more than five hours a day obviously do not work for themselves only. They are, to a large extent, professionals who make searches on behalf of clients who may live outside the survey area.

If a conclusion can be drawn on the basis of the rather small sample obtained, it must be that the facilities of the patent office libraries are important only to a small part of the users of the patent literature. The most regular users constitute only about 15% of the total users. The rest of the 85% are well served by more limited collections of



documents, and whether they go to the patent library or not may be determined by other factors, such as the personal assistance they can expect from the library staff or the effort made by the library to "sell" its services to the public.

Types of Users

The fields of employment of the libraries' users can be grouped into three categories: patents; science, technology, and technical information; and others. The overall figures are as follows: patents personnel, 47%; science and technical information, 37%; others, 16%. There is a tendency for the percentage of patents people to be higher than average at patent office libraries and below average at provincial libraries. It is interesting to note that the patent office libraries in Dublin and Rome have a user distribution similar to that of provincial libraries. The collections of patent documents in those cities may be too limited to allow for the novelty searches needed by patent professionals.

The private sector represents by far the greatest user of the libraries. The only exception seems to be in Manchester, England, where the group "others" is relatively large. A closer look at the questionnaires, however, reveals that about 28% of the "others" are students searching for information.

There is a pronounced difference in the duration of the visits between patent office libraries and provincial

libraries. In the former long visits are dominant, while in the latter short visits are more frequent.

The purpose of the visits, as indicated by the users themselves, was also studied. In general, technical searches are more frequent than bibliographic ones; prior art searches are more important than searches for technical information.

Specific Comments

More detailed insights about the opinions of the users can be gained from the written comments made; 205 such comments were received. The most criticized point was the document collection itself and the availability of the documents (87 comments). More specifically, 56 were dissatisfied with the availability of foreign patent documents and 34 were dissatisfied with the domestic documents or with availability in general. Among other responses, 64 expressed dissatisfaction with the access they have or the means of access. Of these criticisms, 21 found access in general too difficult; 17 found classification inadequate; and 29 criticized the means of access in general, or specifically mentioned indexes, file lists, and so on.

The organization of the library was criticized by 51 users. Of these, 7 criticized the organization in general; 14 mentioned the long wait for ordered documents; 10 criticized library equipment, chiefly reading and copying machines for microforms; 19 complained about the accommodations; 6 said that collections were located in different buildings; and 3 felt that opening hours were too short. Among other comments, 37 mentioned the staff of the library. Specifically, 15 found the library understaffed; 15 found the staff incompetent; while 8 said that the staff was satisfactory. The often criticized microforms situation had only 7 adverse comments.

In the case of some libraries a single problem was considered so important that most comments dealt with it.

Examples are as follows: Poor availability of foreign patent documents: 16 out of 20 comments from one library, and 10 out of 13 comments from another library. Understaffing in one library provoked 10 out of 11 comments. In many, if not most, cases it would be difficult to decide which of the critical remarks are justified and which are not.

Fees for Services?

The last item on the questionnaire attempted to determine whether the dissatisfied user would be willing to pay for improved services. The mere suggestion that this could be a possibility provoked a number of angry comments from hard-pressed taxpayers. In general, the users of the provincial libraries were the most positive; 47% (22 visitors) answered "yes" to the question, whereas only 35% (or 68) of the dissatisfied users of patent office libraries said they were willing to pay. One reason for this difference is that the collections of the patent offices are considered a public record with free access. Many of the written comments supported this feeling. In this connection it is interesting to note that there is only one library covered by the survey where an entrance fee is collected.

Conclusions

A large proportion of the users of the patent libraries belong to the patents profession and use the patent literature for chiefly legal purposes. However, a significant proportion of the users come from circles outside the patent profession and, in particular, the provincial libraries seem to serve this category of user. In several libraries there is an unexpectedly high percentage of users who indicate that searches for technical information is one purpose of their visit—or the only purpose.

It was expected that there would be significant differences between the use and the users of the central (patent office) libraries and the provincial libraries, because the central libraries

normally have an obligation to make certain legal records available to the public. However, the results of the study show that even the simplest attempt to disregard the specialized users of the central libraries strongly reduces the differences between these and the provincial libraries. Therefore, a fair assumption can be made that the difference between the facilities of the two kinds of libraries are not very important to most users.

It is clear from users' comments that the most frequent complaint is the difficulty of access in libraries where the collections are mostly stored in numeri-



cal order. This indicates to a certain extent that if only one set of documents is available, the users would prefer it to be in classified order.

It is apparent that most of the differences in number of users are within what can reasonably be attributed to random effects and differences in the structure of industry in the survey area. But it is also apparent that the figures for Patentschriften-Auslegestelle in Nürnberg are significantly higher than for any other library except Munich. It would be interesting to see what is different about Nürnberg.

The industry in and around Nürnberg is diversified, but this is true also for other cities. The toy industry is, however, important and is reported to be interested in information on patents. The library is a special patents library with a rather large collection in classified order and housed in suitable rooms. The same could be said of the libraries in Lyon and Marseilles where

the number of users is much lower. It may nevertheless be a significant factor because, in their present form, the libraries of Lyon and Marseilles are relatively new and the numbers of their users are reported to be constantly increasing.

In the opinion of the director of Landesgewerbeanstalt Bayern, who is responsible for the Patentschriften-Auslegestelle, the most important factors are that the library has an adequate, competent, full-time staff and is adapted to serve as an active information center, not only as a passive library. A third factor mentioned is that a constant effort is made to make the library and its services known within the local community.

The conclusion must be that there is nothing peculiar about the Nürnberg area. Therefore, since the use of most

other patent collections is much lower than that of the collection in Nürnberg, we can conclude that most patent collections, if not all, must be under-used. The best remedy seems to be an activation of the libraries.

The results of the study also suggest that the facilities of some libraries are inadequate. It may become expensive to make significant improvements; a study of how EEC action could help, e.g., through creation of suitable EURONET services, should be conducted.

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H. Bank is principal administrator, Directorate General, Scientific and Technical Information and Information Management, Commission of the European Communities, Luxembourg.

Actions of the Board of Directors Feb 1-3, 1979

The Board of Directors, Special Libraries Association met Feb 1-3, 1979, at the Marriott Hotel, Tucson, Ariz. The Chapter and Division Cabinets met Feb 1 and 2. A Joint Cabinet meeting was held Feb 2. The following is a summary of actions taken by the Board.

Memorial Resolution—The Board approved a Memorial Resolution to be sent to the family of Dr. Frank E. McKenna, executive director of SLA from October 1970 until his death in November 1978. The text of the Resolution appears on p. 201 of this issue.

Search Committee Announced—The Board endorsed the president's appointments to the Search Committee for the new executive director. The five member committee is chaired by Elizabeth Usher and includes Mary McNierney Grant, Marie Dooling, Gilles Frappier, and Floyd Henderson. All inquiries should be sent to chairman, Search Committee, 235 Park Avenue South, New York, N.Y. 10003.

At the recommendation of the president-elect the Board decided that the employment of an executive director should be on a contractual basis. The exact terms of the contract will be determined by mutual agreement of the Board and the candidate.

A Special Committee of the Board formulated guidelines for the qualifications of the candidates for executive director. These

guidelines will be distributed to the Search Committee.

Executive Committee Actions Ratified—The Executive Committee of the SLA Board of Directors met on Nov 16, 1978. The Board ratified two actions of the Executive Committee:

Following the death of Frank E. McKenna, executive director, the Executive Committee authorized Richard E. Griffin, assistant executive director, to act as executive director until a new executive director assumes responsibility.

So that registration forms for the 1979 Conference could be ordered in time for the Conference mailing in March, registration fees had to be approved in November. Therefore, the Executive Committee approved the fees as they appeared in the tentatively approved Conference Budget.

White House Conference—The Board heard the report of the chairman, SLA Special Committee on the White House Conference on Library and Information Services (WHCLIS). The charge of this Committee is the preparation of materials for WHCLIS. The Committee intends to prepare position papers. The Board authorized the Executive Committee of the Board to review and approve the documents being prepared for WHCLIS (tentative publication date is late April).

Should outside sources of funding for this project not be available, the Board authorized the use of nonserial publications funds for the documents.

National Library Agency—Following the recommendation of the Joint Chapter and Division Cabinet, the Board endorsed the concept of a national lending library with equal access to all types of libraries and which would include all publication formats. As an intermediate step in this goal, SLA supported the concept of a National Periodicals Center.

However, it was felt both by the Joint Cabinets and the Board that it would not be appropriate to endorse a National Library Agency before the White House Conference on Library and Information Services is held.

Honorary Member—As recommended by the Awards Committee, the nomination of Helen F. Spencer, president, Kenneth A. and Helen F. Spencer Foundation, as an Honorary Member of SLA was unanimously endorsed by the Board. SLA members will vote on this nomination at the Annual Business Meeting, Jun 13, 1979.

Conference Dedicated—Because the First Worldwide Conference on Special Libraries was conceived and planned by Frank E. McKenna and because it was his idea that the SLA 70th Annual Conference be an international meeting of special librarians, the Board of Directors has dedicated the Conference to his memory.

A copy of the Dedication has been signed by the president and sent to McKenna's family.

H. W. Wilson—A grant of \$25,000 was received from the H. W. Wilson Foundation to help the Association cover the extraordinary expenses of the 1979 Worldwide Conference on Special Libraries. The Board authorized the president to write a letter of appreciation on its behalf to the Foundation.

Conference Budget—A "barebones" Conference Budget was adopted at the Fall Meeting (see Jan SL, p. 46). By the time of the Winter Meeting, a grant from the H. W. Wilson Company for \$25,000 had been received and other grant proposals were pending. With this knowledge, the Board approved the revised Conference Budget.

Included in the Budget were funds for simultaneous translators and interpreters, the added travel expenses for speakers and their housing, and the added transportation and shipping costs of the Conference. Other expenditures based on grant money received after the Winter Meeting will be recommended by the assistant executive director for approval by the Executive Committee of the Board.

Conference Tapes—The Board asked the Association staff to investigate the feasibility of having tape recordings made of the sessions of the 1979 Conference for sale at the Conference.

Washington 1980 Conference—The Board approved the theme "Realities of the '80s—Challenging the Individual" for the 1980 Annual Conference in Washington, D.C.

Winter Meeting Dates Set—The Board approved the site of the Winter 1982 Meeting at the Galt House Hotel, Louisville, Ky. The dates are Jan 27–29.

Plenum Award—Originally the Plenum Publishing Corporation Award was to be given for an original paper not previously published or presented covering any aspect of special librarianship. Unfortunately, suitable papers were not submitted to the 1976/77 and 1977/78 committees. Therefore, the 1978/79 committee was charged with suggesting an alternate use for the \$1,000 annual Plenum Award. The committee recommended and the Board accepted the idea of a named scholarship for a doctorate in library and information science. Although Plenum will fund the scholarship, the SLA Scholarship Committee will be the administrator of the award. The Scholarship Committee will develop guidelines to administer and implement the Plenum Scholarship. A report will be made to the Board at the Fall Meeting 1979.

The Plenum Publishing Corporation Award Committee was dissolved effective Feb 3, 1979.

Chapter Activity—The Board approved a petition from fifteen SLA members from the central section of Pennsylvania for establishment of a Central Pennsylvania Provisional Chapter. For approval as a full Chapter, a Provisional Chapter must have a minimum of twenty-five members. The boundaries of the Central Pennsylvania

Provisional Chapter are the eastern edges of Franklin, Cumberland, Dauphin, Montour, Columbia, Lycoming, and Tioga counties; the northern boundary of the Commonwealth; the western edges of McKean, Elk, Jefferson, Clearfield, Blair, Huntington, and Fulton counties; and the Mason-Dixon Line.

Division Activity—The Division Cabinet approved a resolution to establish a Standing Committee to consider "...1) petitions for the formation of new Divisions and 2) mergers, name changes, and dissolution of existing Divisions..." This committee will submit its recommendations to the Board. The Board agreed with this concept and asked the Division Cabinet Chairman and Chairman-Elect to rewrite the Division Guidelines. A report on the revision is due in June 1979.

Chapter and Division Allotment Formula Changed—In order to more accurately reflect the financial status of a Chapter or Division when issuing allotments, the SLA accountant recommended to the Board that the wording of the allotment formula be changed. The Board agreed to asking Chapters and Divisions to include information about their liabilities, as well as their assets. The new formula reads:

Each Chapter or Division which has a cash Net Worth (cash assets minus liabilities) at the end of a year in excess of \$8 per member (providing this sum is more than \$1,000) shall receive one-half of the allotment granted for that year. Any Chapter or Division wishing to receive any part or all of the other half of the allotment shall address its request to the Association office to the attention of the Accountant who will remit the amount requested.

This change should decrease the number of initial one-half allotments and thereby reduce the number of requests for the second-half allotments. The new formula became effective Dec 31, 1978.

Statistics Committee—In June 1978 the Board dissolved the Standards and Statistics Committee and established two separate committees [See SL 69 (no.9):376(Sep 1978)]. The following definition of the Statistics Committee, as recommended to the Board by the Committee on Committees, was adopted at the Winter Meeting:

Three members appointed for overlapping terms of three years each, one of whom shall be the SLA representative to the ALA Statistics Coordinating Committee. The Committee shall: 1) survey the statistical needs of special libraries and information centers, and identify definitions useful for internal management and for comparative purposes; 2) inform the Association members of activities and developments in the field of statistics; and 3) serve as liaison with individuals and organizations engaged in collecting, compiling and evaluating library and information center statistics. (Association Office contact is Manager, Professional Development.)

Standards Committee Contact Revised—In drafting the definition of the Statistics Committee, the Committee on Committees realized that the Standards Committee and the Statistics Committee ought to have the same Association Office contact. Therefore, the Board approved the change of the Standards Committee contact to Manager, Professional Development. The definition of the Committee was approved at the Fall Meeting [see SL 70(no.1):48(Jan 1979)].

Copyright Committee—In June 1978 the Board dissolved the Special Committee on Copyright Law Practice and Implementation and instituted a Standing Committee to be known as the Copyright Law Implementation Committee. The Board reviewed the ConC definition which follows and accepted it:

Three members appointed for overlapping terms of three years each, the chairman of which shall be the Representative to the appropriate CNLA copyright committee. The committee shall: 1) monitor the developments stemming from copyright legislation; 2) represent the Association on matters of copyright law implementation; and 3) keep the Association members advised on new developments in the field of copyright. (Association Office contact is the Executive Director.)

Continuing Education—The Chapter Cabinet discussed continuing education at length during its meeting on Feb 1. Several recommendations of the Cabinet were approved by the Board for action:

Effective immediately the Education Committee and the Manager, Professional Development will give Chapters the option

of making local arrangements for Regional Continuing Education Courses.

So that the Chapters, the Education Committee, and the Manager, Professional Development can better understand their relationship to one another and to continuing education, the Education Committee is presently developing guidelines to clarify the various roles of those involved. A report will be made to the Board in June 1979.

The Education Committee and the Manager, Professional Development are also considering the feasibility of Chapter Presidents being informed each summer of the subject matter of the regional courses which will be made available during the ensuing year. The possibility of offering at least ten continuing education courses on separate topics at the Conference in 1980 and future Conferences is being investigated.

Finally, the Board, following a recommendation of the Chapter Cabinet, asked the Education Committee and the Manager, Professional Development to reconsider the offering of Regional Continuing Education Courses as carried out under the Education Committee's Pilot Program, that is, cooperatively sponsored with Chapter involvement at all levels and including at least a 70-30% split of the net income. Their report will be made to the Board at the Fall 1979 Meeting.

Special Libraries—In response to the concern expressed by the Chapter Cabinet that the membership listing would not be included in the 1979 Directory issue and that *Special Libraries* had cost more to produce in 1978 than expected, the Board asked the president to appoint a three-member special committee to investigate the desirability of putting *Special Libraries*, including the Directory issue, on a break-even basis. The Special Committee will report back to the Board at the Fall 1979 Meeting.

Scholarship Awards—The chairman of the Scholarship Committee reported that there has been a steady decline in the number of applicants for scholarships over the last three years. So as not to be forced into a position of having to award four scholarships, she asked that the wording of the Board resolution be changed to an approval of "up to four scholarships for 1979/80." The action passed.

Reciprocal Courtesy Extended—The SLA Representative to the National Federation

of Abstracting and Indexing Services asked the SLA Board to consider offering complimentary Conference Registration and a complimentary subscription to *Special Libraries* to official representatives of organizations that have a cross-representative relationship with SLA. The Board approved this recommendation with the condition that these privileges would be extended only if the representative is not an SLA member.

Reports of Meetings of the SLA Board of Directors—At the request of the Minnesota Chapter, the Board authorized the dissemination of the informal report of Actions of the Board to Chapter and Division Cabinet members. The informal report had previously been sent only to bulletin editors so that they might publish such sections as they wished. Every effort will be made to see that the report is mailed approximately one month after the meeting.

Federal Library Committee—At the request of the Guest Observer, Federal Library Committee (FLC), the Board endorsed the Committee's request for a prompt review of the present outdated Civil Service standards for the Librarian Series (GS-1410) and the Technical Information Series (GS-1412).

In addition, the SLA Board of Directors noted with interest the proposal of the FLC to establish an Information Management Series. The Board endorsed the recommendation of the Guest Observer that the standards for this series "not only include but clearly delineate a career path for librarians as information managers."

These two positions will be conveyed by the SLA president to the U.S. Office of Personnel Management.

Endowment Fund Contemplated—At the recommendation of the SLA president, the Board decided to consider the formation of an endowment fund. The assistant executive director will investigate the procedures necessary to establish such a fund and will report to the Board at the Fall 1979 Meeting.

Association Positions on WHCLIS—The American Society for Information Science has asked the National Science Foundation for funds to coordinate the positions of information science associations for WHCLIS. Three meetings are proposed for this purpose. At the recommendation of the

Joint Cabinets, the Board decided to support this project and to send an SLA representative to each of the proposed meetings. Immediately after the Winter Meeting, the president wrote to NSF on behalf of the Board to indicate the Association's support of the ASIS proposal.

Bibliographic Exchange Format—In December the SLA president received a letter from the executive secretary, Committee for the Coordination of National Bibliographic Control, seeking SLA's help in the development of a common bibliographic exchange format.

The Board asked the assistant executive director to contact the Committee to see how SLA can participate. In addition, the Board asked the Standards Committee to investigate the relevant materials on a common bibliographic exchange format with the assistant executive director and to make a report to the Board at the June meeting.

The Committee is supported by the National Science Foundation, the National Commission on Libraries and Information Science, and the Council on Library Resources. The project is being undertaken with the assistance of Unesco.

Scholarship Fund Contributions Received Jan-Dec 1978

H. W. Wilson Foundation	\$ 5,000.00
Anonymous Trust Income	4,045.02
San Francisco Bay Region Chapter	720.00
Anita T. Goldstein	630.00
ICI Americas, Inc.	300.00
Heart of America Chapter	200.01
Standard Oil Company of California	200.00
Helen E. Iseminger	100.00
St. Louis Metropolitan Area Chapter	100.00
In Memory of Virginia Raynes (St. Louis Metropolitan Area Chapter)	100.00
Texas Chapter	100.00
In Memory of Jim Criswell (Texas Chapter)	100.00
In Memory of Isabelle Bronk (Evelyn Butler)	50.00
Joseph M. Dagnese	50.00
Thomas Heitz	50.00
In Tribute to Clara Stanton Jones on her Retirement and In Memory of Rose S. Sugar (Michigan Chapter)	50.00
John M. Connor	40.00
Alice E. Kingery	40.00
Virginia L. Duncan	35.00
Elizabeth E. Brown	25.00
In Memory of Linda Shear (Cleveland Chapter)	25.00
In Memory of John Connor (Judith Field)	25.00
Agnes O. Hanson	25.00
Carolyn S. Kirby	25.00
Margaret F. MacKellar	25.00
In Memory of F. E. McKenna (Rocky Mountain Chapter)	25.00
Frances J. Rugan	25.00
In Memory of F. E. McKenna (San Diego Chapter)	25.00
In Memory of Virginia Raynes (Southern California Chapter)	25.00
Mary Lee Tsuffis	25.00
Wendell Walker	25.00
Total Other Contributions Under \$25.00	1,121.50
Total Contributions Jan-Dec 1978	\$13,331.53

SLA Award Winners Announced

The SLA John Cotton Dana Award was established in June 1978 to recognize "exceptional services by members of Special Libraries Association to special librarianship." The first award recipients are Ruth S. Smith, Institute for Defense Analysis, and Jessie C. Wheelwright, retired, formerly librarian, Hawaiian Telephone Company.

Frank E. McKenna, the late executive director, SLA, and Gretchen D. Little, retired, formerly librarian, Atlas Library, ICI United States, Inc., Wilmington, Del., have been elected to the SLA Hall of Fame/1979.

Details of the citations will appear in a summer issue of *Special Libraries*.

NETWORKING NOTES

This column will appear irregularly in *Special Libraries* to help keep SLA members informed of activities in the field of networking that pertain especially to special libraries. Please send your comments and suggestions for items to include to the Networking Committee chairman. Members of the committee are Audree Anthony, Vivian Arterberry, Sharon Vipong, and James B. Dodd, chairman, Coordinator of Services to Business & Industry, Georgia Institute of Technology Library, Atlanta, Ga. 30332.

Networking Programs at the Honolulu Conference

The Networking Committee has arranged the following program at Honolulu:

"The Nationwide Network and Special Libraries," by Dr. I. M. Klemptner, School of Library and Information Science, SUNY/Albany, and SLA Representative to the Library of Congress Network Advisory Committee.

"The National Periodical Center—A Status Report," by Laura N. Gasaway, University of Oklahoma Law Library, and SLA Representative to the National Periodicals System Advisory Committee.

"The Place of the Private, For-Profit Library in the National Networks," by Frank H. Spaulding, Bell Telephone Laboratories Library Operations, Holmdel, N.J.

"The Metropolitan Transportation Commission's Automated Data Library," by Dian Gillmar, Information Coordinator, Metropolitan Transportation Commission, Berkeley, Calif.

The committee has also added its sponsorship to a program developed by the Library Management Division, Aerospace Division, Military Librarians Division, and Sci-Tech Division. This program includes the following papers:

"Slow-Scan TV—A Library Network Prototype," by Patricia W. Berger, Environmental Protection Agency, Washington, D.C.

"Shared Bibliographic Input Experiment—An Update," by Hubert A. Sauter, Defense Documentation Center, Alexandria, Va.

Programs of the Telecommunications Division and the Transportation Division will also directly pertain to networking interests.

Library of Congress Network Advisory Committee

SLA is officially represented on this committee by Dr. Irving M. Klemptner. There is one other SLA member on the committee, and three other SLA members are among the observers assigned by other organizations. The committee members and observers, with their affiliations, are listed as follows:

Members

California Library Authority
for Systems and Services

Ronald F. Miller
Executive Director, CLASS
1415 Koll Circle, Suite 101
San Jose, Calif. 95112
408/289-1756

Special Libraries Association
Irving M. Klempner
School of Library and Information
Science
State University of New York/Albany
1400 Washington Ave.
Albany, N.Y. 12222
518/457-8577

Association of American Publishers
Sandra K. Paul
SKP Associates
565 Fifth Ave.
New York, N.Y. 10017
212/687-3145

Observers

American Society for Information Science
Kieth Wright
Dean, School of Library and Information
Science
University of Maryland
College Park, Md. 20742
301/454-5451

National Federation of Abstracting and
Indexing Services
Toni Carbo Bearman
Executive Director, NFAIS
112 South 16th St., 11th Floor
Philadelphia, Pa. 19102
215/563-2406

Networking is a communications job. Furthermore, a good library is a communications medium and should be considered as such right along with TV, radio, newspapers, and so on. Our job is to get the right information to the right people at the right time—even if they do not know they need it. Networking is just a new word for what we have been trying to do all along, using the electronic and other modern technologies of today to do it.

SLA Memorial Tribute to McKenna

The Special Libraries Association Board of Directors released the following statement at the SLA Winter Meeting in Tucson, Ariz:

It was with profound sorrow that the Staff and the Board of Directors of the Special Libraries Association learned of the untimely death of Dr. Frank E. McKenna in his home on Nov 10, 1978.

Executive Director since 1970, he had been a member of the Special Libraries Association since 1953, coming up through the ranks in a variety of offices at the Chapter and Division levels. Before becoming Executive Director, he was Editor, *Special Libraries*. He was an able and exemplary President of the Association in 1966/67.

The personal qualities of determination, generosity, and humor which he brought to the demanding task of executive leadership of SLA, and which, together with his breadth of intellect and vision, based on a firm grasp of essentials, enabled him to make an outstanding contribution to the development of Special Libraries Association. His work in Oslo in 1974 toward the restructuring of the new IFLA statutes was outstanding. His understanding of the librarian's position on exceedingly complicated copyright questions and his participation in negotiations, ultimately resulting in the enactment of the U.S. Copyright Laws of 1976, must be recognized as the crowning achievement of an illustrious career.

His passing is a tragic loss to librarians and information specialists, nationally and internationally. His professional achievements are well

known not only in the United States but in the international information community as a whole.

The Association's 70th Annual Conference to be held in Honolulu, Hawaii, Jun 9-14, 1979 was a project that was very close to his heart. He conceived the idea for the Honolulu Conference in 1972 during his visit to Japan as a guest lecturer. His original conception was a joint meeting of the Japan Special Libraries Association (Sentokyo) and SLA, but because of the interest expressed by special library organizations in other countries, the Conference expanded to include the participation of the Special Libraries Division of the International Federation of Library Associations and Institutions and the special library associations of several Pacific Basin countries. The Conference has been designated by the SLA Board of Directors as the First Worldwide Conference on Special Libraries. The Staff and the Board of Directors are committed to dedicating the Conference as a living memorial to him. They are also committed to continue to carry on the affairs of SLA in the spirit of cooperation and the pursuit of excellence in the manner he would have expected. This, in the end, will be the best tribute we can pay to Frank McKenna.

BE IT RESOLVED, That the Board of Directors place on record its esteem for the deceased Executive Director, and its sorrow at his passing, and,

BE IT FURTHER RESOLVED, That a copy of this Memorial Resolution, signed by the President of the Association, be forwarded to his family as an expression of deep sympathy.

Honolulu in June

What to Expect of the Weather

... and What to Pack

Travel Light! Hawaii is Informal and Warm

Daytime temperatures in June average in the 80s, nighttime temperatures in the 70s. With tradewinds blowing in June, these temperatures are pleasant. There are about thirteen hours of daylight in summer, allowing for plenty of time for sightseeing.

Lightweight, easy-care, loose clothes are in order for both men and women. Bring about the same kind of light-colored resort wear one would take to Florida or the Caribbean, or to the East Coast in August. Shorts for men and women are fine. Comfortable shoes are best, especially

sandals, canvas shoes, or tennis shoes. Evening dress is basically informal. Women wear muumuus or other casual clothes with sandals, while white trousers and aloha or other open-neck shirts are popular with men. Several restaurants require jackets for men, but none require ties. Remember, even bankers and stockbrokers in Hawaii conduct business in aloha shirts.

Don't Forget Bathing Suits and Sunglasses—and Save Space for the Muumuus and Aloha Shirts You will be Bringing Back.

IN MEMORIAM

Beverly M. Knower

Beverly M. Knower, section chief, Library and Information Center of Suntech, Inc., Marcus Hook, Pa., died on Jul 30, 1978, in Media, Pa. of cancer. She is survived by a sister and two brothers.

Beverly, born in Genoa, Wisc., on Oct. 4, 1926, received her BS in chemistry and MS in food technology from the University of Wisconsin. She received her MLS from Drexel University in 1958.

The increasing responsibilities of her positions at Suntech, from junior chemist in 1954 to head of the large information resource at the time of her death, were a direct result of her hard work, long hours, and high intelligence. Her success was especially due to her concern and care for the needs of the individuals who used her library. Her ability to see problems from several viewpoints led to satisfying solutions for staff and executive alike. Her own problems were never more important to her than those of the newest staff member; the highest executives knew the information they needed would be carefully and completely prepared for their use. She was a librarian who put people first.

Her activities in Special Libraries Association followed the same pattern. She was active in the Philadelphia Chapter, holding various offices, including president (1965/66). She was chairman, Petroleum Section, Sci-Tech Division (1964/65). She served on the American Petroleum Institute's subcommittee on indexing and abstracting for seventeen years. She was also a member of the

American Chemical Society and the American Society for Information Science.

It is not surprising that she had many friends—friends, not acquaintances. Her interests were diverse and many of them were deep and lasting. She was a gourmet cook and a superbly gracious hostess; an oil painter whose works brought good prices in the market place; a true patron of the arts: music, theater, painting, ballet, crafts; and a world traveler. Best of all, she shared all of her wonder and love of life with her friends.

It was Bev's caring and her willingness to share that prompted her to such generous giving to Drexel Library School, and to the many students whom she quietly helped out in so many ways. This was an aspect of her activities that no one except the beneficiaries knew about, yet we were not surprised when we learned of it. She was truly concerned about library students and wanted them to be prepared to render the best service, the kind which she always provided.

Everyone at Suntech will miss her; she was involved in a truly creative process there as the library developed into an information center of great value. Her friends will miss her; there, too, she was creative as her great interests and talents and love touched and influenced our lives. We miss her, but memories live on to inspire and enrich us continually.

Elizabeth Tomlinson
White Memorial Library
University of Maryland
College Park

COMING EVENTS

May 18-19. University of Chicago Graduate Library School, 40th Annual Conference . . . Palmer House, Chicago. Theme: The Role of Libraries in the Growth of Knowledge. Contact: Dean, Graduate Library School, JRL 5-106, 1100 E. 57th St., Chicago, Ill. 60637.

May 21-22. The American University, Third Annual Institute on Federal Information . . . Washington, D.C. Contact: Melinda Beard or Lowell Hattery, Institute on Federal Information: Policies and Access, College of Public Affairs, American University, Massachusetts and Nebraska Aves., N.W., Washington, D.C. (202/686-2513).

May 21-Jun 1. Seminar in Art and Museum Librarianship . . . Syracuse, N.Y. Sponsored by Syracuse University School of Information Studies. Contact: Prof. Antje B. Lemke, School of Information Studies, Syracuse University, 113 Euclid Ave., Syracuse, N.Y. 13210.

May 24-26. Ontario Association of Library Technicians/Association des Bibliotechniciens de l'Ontario, Sixth Annual Conference . . . New College, University of Toronto, Ont. Sponsored by OALT/ABO Toronto Area Regional Branch. Contact: OALT/ABO, P.O. Box 527, Thornhill, Ont., Canada, L3T 4A2.

May 29-Jun 1. National Archives Course in the Use of Primary Sources . . . Archives Building, Washington, D.C. Topic: Going to the Source: An Introduction to Research in Archives. Fee: \$60. Contact: Elsie Freivogel,

Education Division, National Archives and Records Service, Washington, D.C. 20408 (202/523-3298).

May 30-Jun 1. Critical Issues in Cooperative Library Development: A Conference on Networks for Networkers . . . Indianapolis, Ind. Jointly sponsored by Indiana Department of Public Instruction, Indiana Cooperative Library Service Authority, Purdue University Library and Audiovisual Center, and Indiana University Graduate Library School. Contact: Jean Gnat, Indiana University-Purdue University at Indianapolis, 420 Blake St., Indianapolis, Ind. 46202.

Jun 2-7. Medical Library Association, 78th Annual Conference . . . Honolulu, Hawaii. Write: MLA, 919 W. Michigan Ave., Chicago, Ill. 60611.

Jun 4-7. National Computer Conference . . . Americana Hotel, New York City. Sponsored by the American Federation of Information Processing Societies. Preregistration cost: \$60. Contact: NCC '79, c/o AFIPS, 210 Summit Ave., Montvale, N.J. 07645.

Jun 6-8. Institute of Information Scientists, Annual Conference . . . Imperial Hotel, Torquay, England. Theme: Towards 2001: New Information Technology and Its Future Impact. Fee: £70 members, £90 nonmembers. Contact: Mike Allen, Head of Information Services Unit, Beecham Pharmaceuticals, Coldharbour Rd., The Pinnacles, Harlow, Essex, England.

Jun 7-9. The International Flow of Information; A Trans-Pacific Perspective, Institute . . . Makaha Inn, Hawaii. Sponsored by the Center for the Book in the Library of Congress, the U.S. International Communication Agency, and the University of Hawaii Graduate School of Library Studies. Contact: Sarah K. Vann, Graduate School of Library Studies, University of Hawaii at Manoa, Honolulu, Hawaii 96822.

Jun 9-14. Special Libraries Association, Worldwide Conference on Special Libraries . . . Hilton Hawaiian Village and Ilikai, Honolulu, Hawaii. Theme: Politics and Economics: Their Impact on Library/Information Services. Also participating: International Federation of Library Associations and Institutions Special Libraries Division and Japan Special Libraries Association (Sentokyo).

Jun 11-13. Fourth Nordic Information and Documentation Congress . . . Uppsala, Sweden. Theme: Information Support in the 1980s. Write: Swedish Society for Technical Documentation, Box 5073, 10242 Stockholm, Sweden.

Jun 11-15. American Theological Library Association, Annual Conference . . . St. Paul, Minn. Contact: Dr. Norris Magnuson, librarian, Bethel Theological Seminary, 3949 Bethel Dr., St. Paul, Minn. 55112.

Jun 12-15. Office of Management Studies, Association of Research Libraries, Library Skills Institute . . . Chicago, Ill. Fee: \$200. Contact: OMS, Association of Research Libraries, 1527 New Hampshire Ave., N.W., Washington, D.C. 20036 (202/232-8656).

Jun 12-15. National Archives Course in the Use of Primary Sources . . . Chicago Historical Society. Topic: Going to the Source: An Introduction to Research in Archives. Fee: \$60. Write Elsie Freivogel, Education Division, National Archives and Records Service, Washington, D.C. 20408, or call Robert Brubaker, Chicago Historical Society (312/642-4600).

Jun 14-20. Canadian Library Association, Annual Conference . . . Ottawa, Canada. Write: Business Manager, CLA, 151 Sparks St., Ottawa, Ont., Canada K1P 5E3.

Jun 17-20. Association of Jewish Libraries, Annual Convention . . . Cincinnati. Contact: Robert Singerman, 3101 Clifton Ave., Cincinnati, Ohio 45220.

Jun 17-22. Twenty-fourth Seminar on the Acquisition of Latin American Library Materials . . . University of California, Los Angeles. Theme: Caribbean Research and Resources in Europe and the Americas. Fee: \$25 members, \$35 nonmembers. Contact: Anne H. Jordan, Benson Latin American Collection, The University of Texas, Austin, Tex. 78712.

Jun 24-30. American Library Association, Annual Conference . . . Dallas, Tex.

Jun 24-30. Theatre Library Association, Annual Meeting . . . Dallas, Tex.

Jun 25-27. Scandinavian Audiological Society, Annual Conference . . . Panum Institute, Copenhagen, Denmark. Scandinavian languages only.

A Model Management Curriculum for Special Librarians

The Metropolitan Washington Library Council is conducting a series of four management training courses in the spring of 1979 for special librarians in the Washington area. The Library Council has been conducting management courses for librarians since 1975. This is the first series designed specifically for special librarians. The program is being funded by the Library Education and Post-secondary Resources

Branch of the U. S. Office of Education and the Washington, D.C. Chapter of the Special Libraries' Association.

The goal of the program is twofold: 1) to develop and evaluate a curriculum for practicing special librarians designed to improve their managerial effectiveness; 2) to publish a description of the program which will include administrative guidelines and a series of specialized instructional materials

which can be used to develop similar workshops for other special librarians. The publication will also include suggested course modifications based upon evaluation data gathered from participants, project staff, and instructors.

In preparation for the project the Library Council conducted an in-depth needs assessment in July of 1978 involving over 100 Washington, D.C., area special librarians. Participants were asked to establish the priorities of their management training needs in an interactive problem-identification session. Based on the results of the needs assessment the following courses were selected for inclusion in the program:

- Human Resources Management
- Financial Management
- Management Communications
- Planning for Special Library Management

Participation is open to Washington, D.C., area special librarians in top and middle management positions with current management responsibility in the workshop topics.

One of the major outcomes of the program will be a publication which will include a curriculum guide describing the courses and a series of specialized instructional materials. Administrative guidelines will also be included. These guidelines may

be used by special library training administrators to develop similar programs. In addition, the curriculum guide may be used by their instructors to replicate the courses themselves. The publication will contain 1) an assessment from a practical point of view of the advantages and disadvantages of a management curriculum for special librarians; 2) suggested topics which have proved valuable; 3) an outline of procedures necessary to establish the program; 4) syllabi of instructional units tested; and 5) actual instructional materials specifically adapted to special libraries and guidelines for their use. The publication will be published by the Library Council in late summer of 1979 and be made available through ERIC and GPO.

The Library Council has published a similar report which outlines its previous experience in developing management courses for librarians. The report, entitled *Continuing Library Education: An Interdisciplinary Approach*, can be ordered in microfilm only for \$5.00, prepaid by contacting the Information Center, Metropolitan Washington Council of Governments, 1225 Connecticut Ave., N.W., Washington, D.C. 20036 (202/223-6800).

For further information about the management curriculum for special librarians contact Mary Sage, Library Planner, Metropolitan Washington Library Council, 1225 Connecticut Avenue, N.W., Washington, D.C. 20036 (202/223-6800).

STAFF DEVELOPMENT

Burack, Elmer H. and Miller, Edwin L. / A Model for Personnel Practices and People. *Personnel Administrator* 24(no.1):50-56 (Jan 1979).

Human Resource Management (HRM), some of the factors which gave rise to its emergence, and its implications for personnel are described. HRM is characterized by increased involvement in the development of policy and guidelines, as well as the implementation of programs and techniques designed to put policies into effect. The emphasis of the model will be less on programs and techniques and more on the quality and quantity required to help the organization achieve its goals.

The First Job: Making the Transition to Manager. *S.A.M. Advanced Management Journal* 43(no.4):54-60 (Autumn 1978).

The role that goal setting and career planning should play in the plans of self-motivated

aspirants to top management positions is discussed. In an interview, a new young manager describes his experiences and ideas regarding the adjustments that must be made even in personal lifestyle and leisure activities if one intends to go up the management ladder.

Johnston, Robert W. / Seven Steps to Whole Organization Development. *Training and Development Journal* 33(no.1):12-22 (Jan 1979).

Presents a seven-step plan for development of a whole organization, applicable to groups of varying sizes. Steps include clarification of whole organization objectives, data gathering, diagnosis, prescribing interventions, commitment, implementation, and progress review. Five charts and the description of a case study help to clarify the steps in the process.

Kramer, Otto P. / Flexible Working Hours. *Journal of Systems Management* 29(no.12):17-21 (Dec 1978).

Gives rationale for flexible working hours and describes procedures that can be used. Points out advantages and disadvantages of such a system. Most organizations that have converted to the flexible hours system believe it has improved utilization of human resources and employee relations.

McMaster, John B. / Designing an Appraisal System That Is Fair and Accurate. *Personnel Journal* 58(no.1):38-40 (Jan 1979).

Describes a method of designing and implementing a personnel appraisal system that can be used to identify employees 1) who have potential for advancement, 2) who need additional training, 3) who perform well in their present position but have limited potential, and 4) who should, for one reason or another, be terminated. Eight specific components of the system are discussed.

Michaud, Robert E. / The Staff Development Function—Assessing Training Needs. *Training and Development Journal* 32(no.8):62-63 (Aug 1978).

Presents method for obtaining information needed for staff development program. Suggests questions that should be asked of program directors. Responses are categorized and arranged in an assessment form on which participants check items according to interest, level, and importance. When the items checked on the assessment forms are assigned priorities, a staff development program can begin.

A Manager's Guide to Successful Meetings. *Training and Development Journal* 32(no.10):12-16 (Oct 1978).

A down-to-earth article outlining in detail the steps one must go through in planning a successful meeting. The importance of walking throughout the entire sequence is stressed.

Milk, Leslie B. / The Key to Job Accommodations. *Personnel Administrator* 24(no.1):31-33,38 (Jan 1979).

Legislation requires that those firms or individuals doing \$25,000 of business with the federal government or institutions receiving federal financial assistance must take affirmative action steps in recruiting, hiring, and advancing in employment qualified handicapped individuals. Included in the legislation is the requirement to make reasonable accommodation for qualified handicapped individuals. The author points out that imagination in determining "reasonable accommodation" is more important than expense and that attitudes are a determining ingredient in an effective accommodation process.

Motivational Programs—Or How You Can Get More Out of You. *Administrative Management* 32(no.9):30-32ff (Sep 1978).

Describes motivational programs at various levels in different forms. Purpose of the programs is to strengthen the ability of people to do a better job, to face new challenges, and maintain a positive attitude. Suggests books and films that have helped to create successful programs.

Watson, Thomas B. / Making Negative Feedback Work. *Personnel Journal* 57(no.12):680-681 (Dec 1978).

Individuals need feedback to increase their job effectiveness. Negative feedback identifies areas where improvements are desired or necessary and specifies how these improvements can be made. In order for such feedback to be helpful, three things are necessary: an understanding of what is said, acceptance on the part of the employee, and an action taken. The author describes how these steps can result in better relationships in an organization.

Lucille Whalen

REVIEWS

The On-Line Revolution in Libraries; Proceedings of the 1977 Conference in Pittsburgh, Pennsylvania. Allen Kent and Thomas J. Galvin, eds. New York, Marcel Dekker, 1978. 203p. ISBN 0-8247-6754-3.

More than 700 librarians, information specialists, managers of information services, information industry representatives, and so on, had gathered at the University of Pittsburgh to listen to a number of prepared papers and to discuss "The On-Line Revolution in Libraries." One wonders whether it

was truly a revolution that they were discussing or whether it was more likely an evolutionary process—the gradual introduction and integration of information technology—that was transforming modes of access, scope, speed, depth, costs, effectiveness, and even the overall philosophy of providing library services.

The list of 27 major contributors to the proceedings of this conference certainly includes many individuals who are well-known in the information field for their significant contributions. Five position papers dealt with: 1) the potential of on-line information systems (Allen Kent); 2) the impact of on-line systems on national infor-

mation policy and on local, state, and regional planning (Lee G. Burchinal); 3) the impact of on-line systems on library functions (Miriam A. Drake); 4) the impact of on-line systems on the clientele (Paul E. Peters and Ellen G. Detlefsen); and 5) the training and retraining of librarians and users (Elaine Caruso).

The position papers, the order of their presentation, as well as the scheduled reactor comments reflected, of course, the projected content and intended structure for the conference. Yet, having read the conference proceedings, it becomes apparent that certain underlying concerns manifested themselves at almost every conference session, regardless of the specifics of the papers presented. These concerns include: How will on-line services be paid for? Is the issue of user charges to be reduced to "fee or free"? Is the NCLIS assumption of "information as a national resource" to be undermined and eventually abandoned? Are on-line systems to be designed for intermediaries, or for direct user access? Are systems to be developed to meet the information needs of *all* our publics, or only for those publics that meet the test of the market place? Are on-line systems to encompass numeric data bases, current research data bases, i.e., are they to access the totality of stored information in machine-readable form or should they be confined to "bibliographic" data bases?

For the most part, the papers and reactor comments were well organized and highly informative. They tended, however, to emphasize information technology relevant to on-line systems without paying sufficient attention to the need of an improved intellectual apparatus essential for the attainment of quality retrieval and the reduction of redundant and irrelevant output. Should people really be awed by the technological achievement of having the entire text of *The New York Times* available to us on-line? How can one retrieve desired information without being flooded by a superabundance of false drops? Detlefsen's paper touched on this and similar issues.

By inference, Kent's paper may have given a hint at some possible solutions. Being revolution oriented, Kent deplored alphabetic thinking and its monodimensional search approaches by stressing on-line combinatory or correlative retrieval which is now made possible through use of modern, interactive systems. His paper amply emphasized that for certain types of

searches, correlative searching offers the most efficient and economic means of access.

Drake, from Purdue University, did a fine job of summarizing the applications of on-line systems in terms of their potential toward improving resource sharing, collection building, cooperative processing, speed of searching, provision of system management data, and similar factors. Martha Williams, director of Information Retrieval Research Laboratory, University of Illinois, thought that a revolution in information retrieval was indeed occurring. As an example, she referred primarily to the machine-readable data bases of abstracting and indexing services.

Burchinal discussed electronic means of transmission, frequently coupled with micrographic storage of large files, as offering the greatest hope of attaining the objectives of lowering unit costs, allowing for management of increasing volumes of information, and increasing its effective uses. Carlos A. Cuadra, buttressed by several other speakers, invoked the economic theories of Adam Smith. He noted that the federal government could be asked to step in; by taxing the entire public, the government could subsidize service for those who would like to use on-line service but presently cannot afford to do so. "But why just on-line information services?," he asks, "Why not ask the federal government to pay for all the costs of university libraries or public libraries?" Cuadra apparently refused to acknowledge that many university libraries, most public libraries, such as *Chemical Abstracts*, *Biological Abstracts*, and so on, are subsidized in whole or in part by public funds.

Several speakers provided the perspective necessary to counterbalance the more extreme views. In a cool-headed manner, Richard De Gennaro, Keith Doms, John G. Lorenz, and Susan K. Martin were able to assess the on-line revolution in terms of their own vast experiences as librarians and administrators of functioning library systems. On the whole, the conference papers, reactor statements, and audience comments represent a cross-section of the thinking and technology applications relevant to the state of the art of on-line systems—systems which are undergoing evolutionary, if not revolutionary, development.

Dr. Irving M. Klempner
School of Library and Information Science
State University of New York/Albany

PUBS

(79-031) **Industry Analysts in the Federal Government.** Washington, D.C., Washington Researchers, 1978. 23p. \$10.00.

Names and phone numbers of over 100 Department of Commerce analysts who monitor activities within specific industries. Arranged by Standard Industrial Classification Codes (industry and product), with an alphabetical index. Available from: Washington Researchers, 910 17th Street, N.W., Washington, D.C. 20006. 202/452-0025.

(79-032) **Barrier-Free Meetings: a Guide for Professional Associations.** Redden, Martha Ross, Wayne Fortunato-Schwandt, Janet Welsh Brown. Washington, D.C. American Assn. for the Advancement of Science, 1976. 73p. \$4.00. ISBN 0-87168-229-X.

Explains how to make meetings accessible to the physically disabled.

(79-033) **Reference and Information Services: A Reader.** Katz, Bill, and Andrea Tarr, eds. Metuchen, N.J., Scarecrow, 1978. 466p. \$12.50. LC 77-20698, ISBN 0-8108-1091-3.

Thirty-seven recent essays dealing with the practice of reference/information service, and with the types of reference tools.

(79-034) **Library Searching: Resources and Strategies.** Morris, Jacquelyn M., and Elizabeth A. Elkins. New York, Jeffrey Norton, 1978. 129p. \$8.95 hardcover, \$5.95 paperback. LC 77-9214, ISBN 0-88432-004-9 hardcover, ISBN 0-88432-005-7 paperback.

A handbook of library research, originally developed for use in an academic library user-education program. Examples are drawn from the environmental sciences.

(79-035) **Evaluations of Micrographic Equipment** (Resource Report 12). Wolk, Sue, comp. Silver Spring, Md., National Micrographics Assn., 1978. 6p. \$2.00 to NMA members, \$3.00 nonmembers.

A bibliography of micrographic equipment evaluations. Available from: NMA, 8728 Colesville Rd., Silver Spring, Md. 20910.

(79-036) **A Basic Music Library: Essential Scores and Books.** Music Library Assn., comp.; Pauline Shaw Bayne, ed. Chicago, American Library Assn., 1978. 182p. \$5.00. LC 78-11997, ISBN 0-8389-0281-2.

Annotated list of 952 scores, books, and periodicals.

(79-037) **Federal Yellow Book.** Looseleaf service. \$95/year. ISSN 0145-6202.

Directory of the U.S. executive branch: names and phone numbers of 25,000 top administrators in the Executive Office of the President, departments, agencies, and regional federal offices. Published by The Washington Monitor, 499 National Press Building, Washington, D.C. 20045.

(79-038) **Supervision: An Introduction to Business Management.** Shapiro, Steven L. New York, Fairchild, 1978. 307p. LC 77-94514, ISBN 87005-213-6.

Introductory text. Topics discussed include general management theory, motivation, leadership, communication, selection, and training of employees.

(79-039) **Contemporary Art and Artists: An Index to Reproductions.** Parry, Pamela Jeffcott, comp. Westport, Conn., Greenwood, 1978. 327p. \$25.00. LC 78-57763, ISBN 0-313-20544-2.

Guide to locating illustrations of works of art produced since 1940, based on 60 books and exhibition catalogs. Each entry includes artist; title, date, material, and location of work; publications in which illustrations of the work appear.

(79-040) **Charging for Computer-Based Reference Services.** Watson, Peter G., ed. Chicago, American Library Assn. Reference & Adult Services Division, 1978. 49p. \$4.00 prepaid. ISBN 0-8389-6356-0.

Proceedings of a program organized by the RASD at the ALA Conference in Detroit, 1977. Three presentations—on the history of charging for services, on intellectual freedom issues, and on operational considerations—are followed by a discussion.

(79-041) **A Computer Network Protocol for Library and Information Science Applications.** NCLIS/NBS Task Force on Computer Network Protocol. Washington, D.C., National Commission on Libraries and Information Science, 1977. 90p. Single copies free from NCLIS, \$2.75 from GPO. GPO stock number 052-003-00601-4.

Describes a proposed computer-to-computer protocol for electronic communication of digital information over a nationwide library bibliographic network. Available from NCLIS, Suite 601, 1717 K Street, NW, Washington, D.C. 20036 (202/653-6252).

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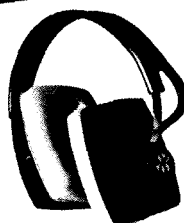
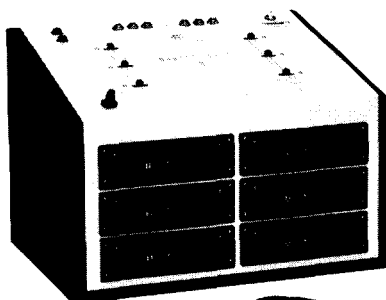
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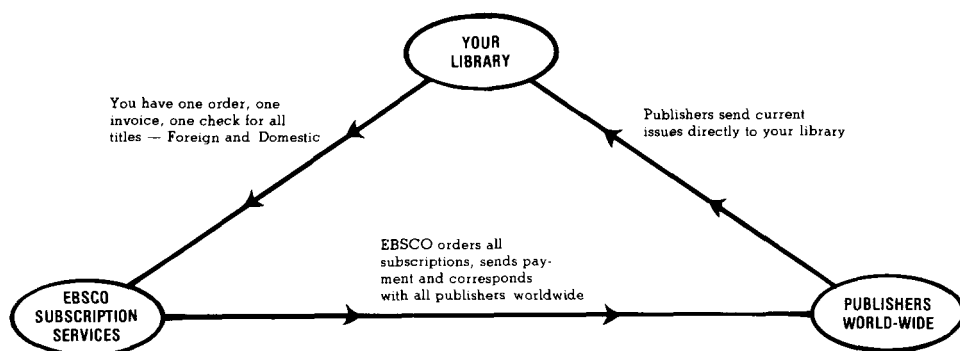
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